ECONOMIC COMMISSION FOR EUROPE

ECONOMIC SURVEY OF EUROPE

2002 No. 2

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Geneva

ECONOMIC SURVEY OF EUROPE

2002 No. 2

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EXPLANATORY NOTES

The following symbols have been used throughout this *Survey*:

.. = not available or not pertinent

– = nil or negligible

* = estimate by the secretariat of the Economic Commission for Europe

| = break in series

In referring to a combination of years, the use of an oblique stroke (e.g. 1998/99) signifies a 12-month period (say, from 1 July 1998 to 30 June 1999). The use of a hyphen (e.g. 1998-2000) normally signifies either an average of, or a total for, the full period of calendar years covered (including the end-years indicated).

Unless the contrary is stated, the standard unit of weight used throughout is the metric ton. The definition of "billion" used throughout is a thousand million. The definition of "trillion" used throughout is a thousand billion. Minor discrepancies in totals and percentages are due to rounding.

References to dollars ($) are to United States dollars unless otherwise specified.

The membership of the United Nations Economic Commission for Europe (UNECE) consists of all the states of western Europe, eastern Europe and the territory of the former Soviet Union, North America and Israel.

The term *transition economies*, as used in the text and tables of this publication, refers to the formerly centrally planned economies of the ECE regions. *Eastern Europe* refers to the economies of Albania, Bosnia and Herzegovina, Bulgaria, Croatia, the Czech Republic, Hungary, Poland, Romania, Slovakia, Slovenia, The former Yugoslav Republic of Macedonia and Yugoslavia. The *Baltic states* refers to Estonia, Latvia and Lithuania and the *CIS countries* refers to Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Republic of Moldova, Russian Federation, Tajikistan, Turkmenistan, Ukraine and Uzbekistan.

ABBREVIATIONS

BIS	Bank for International Settlements
BSEE	Baltic states and eastern Europe
CEE	central and eastern Europe
CEEC	central and east European countries
CEECA	central and eastern Europe and central Asia
CEPR	Centre for Economic Policy Research
CETE	central European transition economies
c.i.f.	cost, insurance and freight
CIS	Commonwealth of Independent States
CMEA	(former) Council for Mutual Economic Assistance
CPI	consumer price index
CSEE	central and south-east Europe
DIW	Deutsches Institut für Wirtschaftsforschung (German Institute for Economic Research)
ECB	European Central Bank
ECE	Economic Commission for Europe
ECHP	European Community Household Survey Panel
ECI	employment conditional incentive
ECLAC	Economic Commission for Latin America and the Caribbean
EEA	European Economic Area
EIU	Economist Intelligence Unit
EMU	economic and monetary union
EPL	employment protection legislation
EU	European Union
EURIBOR	euro interbank offered rate
FDI	foreign direct investment
G-7	Group of Seven
GDP	gross domestic product
GDR	(former) German Democratic Republic
GNP	gross national product
GSOEP	German Socio-economic Panel
HICP	Harmonized Index of Consumer Prices
HWWA	Hamburgischen Welt-Wirtschafts-Archiv (Hamburg Institute of International Economics)
IALS	International Adult Literacy Survey
ICT	information and communications technology
IIF	Institute of International Finance, Inc.
ILO	International Labour Office
IMF	International Monetary Fund

ISM	Institute for Supply Management
LFS	labour force survey
MGI	minimum guaranteed income
NAIRU	non-accelerating inflation rate of unemployment
NBER	National Bureau of Economic Research
NMP	net material product
OECD	Organisation for Economic Co-operation and Development
OPEC	Organization of the Petroleum Exporting Countries
OPT	outward processing trade
PES	public employment services
PPP	purchasing power parity
RPIX	retail price index excluding mortgage interest payments
SETE	south-east European transition economies
TACIS	Technical Assistance for the Commonwealth of Independent States (of the EU)
UNECE	United Nations Economic Commission for Europe
USSR	(former) Union of Soviet Socialist Republics
VAT	value added tax

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PREFACE

The present *Survey* is the fifty-fifth in a series of annual reports prepared by the secretariat of the United Nations Economic Commission for Europe to serve the needs of the Commission and of the United Nations in reporting on and analysing world economic conditions.

Until 1997 the *Economic Survey of Europe* was issued once a year as was the *Economic Bulletin for Europe*, the secretariat's second publication which focused on trade and payments issues. At its 52nd Session, in April 1997, the Commission decided to replace these two publications with an annual *Survey* of several issues. In 1998 and 1999 there were three issues each year. There are now two issues a year published in April and November.

The Survey is published on the sole responsibility of the Executive Secretary of ECE and the views expressed in it should not be attributed to the Commission or to its participating governments.

The analysis in this issue is based on data and information available to the secretariat in early October 2002.

Economic Analysis Division
United Nations Economic Commission for Europe
Geneva

PART ONE

RECENT ECONOMIC DEVELOPMENTS AND THE SHORT-RUN OUTLOOK IN THE ECE REGION

CHAPTER 1

THE ECE ECONOMIES IN AUTUMN 2002

1.1 The global context and western Europe

(i) The global context

Global economic recovery loses momentum

The strengthening of global economic activity in the first quarter of 2002 progressively lost its momentum in the second and third quarters. This reflected to a large extent the renewed weakness of economic growth in the United States, which spilled over to other regions of the world economy. In western Europe, the rate of economic expansion remained moderate in the first two quarters, due to the weakness of domestic demand. Short-term economic indicators for western Europe suggest that, as in the United States, activity was sluggish in the third quarter of 2002. In contrast, and based on data for the first half of the year, growth in the transition economies has so far remained surprisingly resilient to the weaker than expected growth in the rest of the world, especially in western Europe.

International trade in 2002 started to recover from the downturn of 2001, when the global volume of goods and services fell by 0.1 per cent, the first contraction in two decades. The upturn was mainly due to stronger import demand from the United States and emerging Asia. The rise in United States imports stimulated bilateral trade with most regions of the world, including western Europe, whereas in Asia, the impact was more regional (notably benefiting Japan).

Stock markets plummet with adverse effects on private sector spending behaviour

The short-term economic outlook has become more uncertain, with downward risks, increased by further steep falls in equity values on international stock markets, following those which had already occurred since the first quarter of 2000, when the speculative bubble in stock prices burst (chart 1.1.1). This has led to considerable losses of financial wealth for private households and businesses. In western Europe, these losses amounted on average to some 40 per cent at the end of September 2002 compared with the beginning of the year and to some 60 per cent since the peak of the stock market bubble in March 2000. On average, the declines were actually somewhat less pronounced in the United States, except for the NASDAQ composite index, with a large "high-tech" component, which has fallen by 75 per cent since its last peak in March 2000 (table 1.1.1).

Falling stock markets in 2002 can be attributed to worries about the faltering economic recovery in the United States and disappointing corporate profits, actual and expected. Selling pressures on the equity markets were further intensified by a series of corporate financial scandals, notably in the United States, which have eroded investors' trust in profit statements and company valuations. In addition, the uncertainty created by the prospect of a military conflict in Iraq has also played an increasing role in the second half of the year. But, this further fall in share prices can also be interpreted as the continuation of the post-bubble adjustment required to bring equity valuations in line with more plausible longer-term profit expectations and price-earnings ratios.

The substantial loss in financial wealth due to lower equity values will tend (with a lag) to dampen private consumption expenditures. The direct and indirect impact on economic activity will depend on the importance of equities in households' total assets, the marginal propensity to consume out of financial wealth and the extent to which households and businesses regard the changes in equity valuations as temporary or permanent. Falling share prices will also adversely affect fiscal revenues from capital gains taxes.

The international economic consequences of a stock market collapse will be amplified if, as is currently the case, the fall in equity prices is not limited to a single country but rather occurs simultaneously in all the major economies. Estimates suggest that the marginal propensity to consume out of equity wealth is about 4-7 per cent in the United States.[1] For the United Kingdom, the corresponding figure is estimated to be some 4 per cent but only 1 per cent in Japan and the euro area. But there are also estimates pointing to higher spending propensities of up to 3 per cent in France and Italy.[2]

The OECD[3] estimated that a 20 per cent simultaneous fall in real equity prices in all the major economies reduces real GDP in the OECD area by 0.6 per cent in the first year. The impact is much larger – a

---

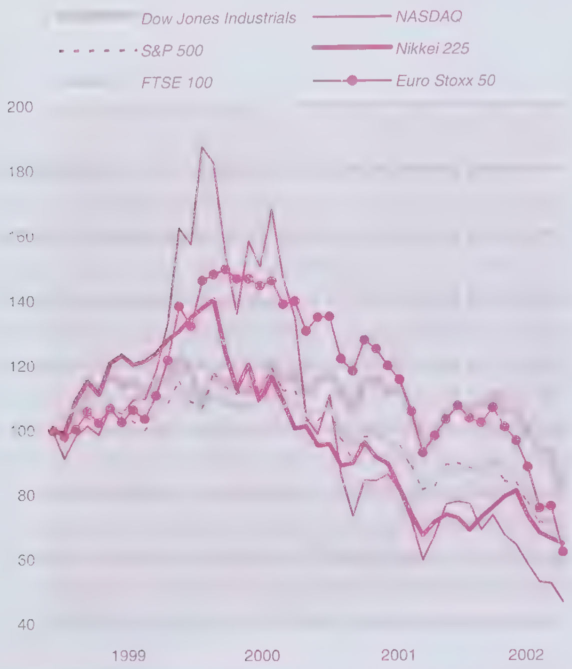
[1] OECD, *Economic Outlook*, No. 64 (Paris), December 1998, pp. 167-168.

[2] IMF, *World Economic Outlook* (Washington, D.C.), September 2002, p. 6, box 1.1 (www.imf.org); ECB, *Monthly Bulletin* (Frankfurt am Main), September 2002, p. 27, box 3.

[3] OECD, op. cit.

CHART 1.1.1

International share prices, January 1999-September 2002
(Indices, January 1999=100)



Source: Internet website (www.stoxx.com).
Note: End of month data.

decline of 1 percentage point – in the United States. The negative impact on the four major western European economies is much smaller, amounting, on average, to some 0.25 percentage points of real GDP. These are only orders of magnitude given the large margin of error surrounding estimates of the marginal propensity to consume out of financial wealth and the assumptions postulated in such analysis. Estimates for the euro area – assuming a marginal propensity to consume of 1 per cent and a fall of share prices as above – point also to a lowering of GDP growth by a quarter of a percentage point.[4] It goes without saying that a larger spending propensity would lead to a proportionally larger decline in the rate of economic growth. Taking into account the possible adverse effects of the fall in equity prices on the cost and availability of company finance will further amplify these negative effects. Simultaneous changes in monetary conditions, i.e. in real short-term interest rates and the real exchange rate can also affect the outcome.[5]

TABLE 1.1.1

Changes in international share prices
(Per cent)

	September 2002 value compared with:	
	Recent peak in 2000Q1	*January 2002*
United States		
NASDAQ	-76.8	-40.8
Dow Jones	-35.2	-24.6
S&P 500	-46.6	-29.4
Europe		
Stoxx 50	-55.3	-36.2
Euro Stoxx 50	-59.7	-41.3
DAX Xetra	-65.7	-46.4
CAC 40	-59.9	-39.4
FTSE 100	-46.3	-28.7
Japan		
Nikkei 225	-55.0	-13.7

Source: Internet websites (www.yahoo.com) and (www.stoxx.com).
Note: Comparisons based on index values for last trading day of the month; January 2002: first trading day.

Renewed cyclical weakness in the United States but monetary policy remains on hold

In the *United States*, recent revisions to the national accounts data show that real GDP rose by only 0.3 per cent in 2001, which is substantially lower than the previous estimate of 1.2 per cent. The revised data significantly alter the pattern of quarterly changes in real GDP in 2001, which is now seen to have declined in each of the first three quarters of the year.[6] This means that the United States economy was already in recession, albeit only a shallow one, in 2001.[7] These revisions are in line with the assessment of the NBER, which announced in November 2001 that a peak in the economic cycle had occurred in March 2001.[8] The new data confirm that the adverse overall economic effects of the September 11 events were relatively small and short lived.[9]

The rate of economic expansion in the United States slowed markedly after the first quarter of 2002, when there had been a significant rebound in economic activity (table 1.1.2). In the second quarter, real GDP rose moderately by only 0.3 per cent, equivalent to a seasonally adjusted annual rate of 1.3 per cent. Growth of private consumption expenditures weakened significantly, reflecting a combination of smaller increases

---

[4] European Commission, *Quarterly Report on the Euro Area*, No. III/2002 (ECFIN/431/02-EN) (Brussels), 25 September 2002, pp. 7-8; IMF, op. cit.

[5] The IMF estimates that lower real interest rates and the real effective depreciation of the dollar in 2002 will tend to fully offset the negative wealth effects stemming from the fall in equity prices since March 2002. In contrast, the real effective appreciation of the euro witnessed in 2002 will amplify the negative wealth effect. IMF, op. cit.

[6] Previous estimates showed slowing growth in the first two quarters and a fall in real GDP – partly associated with the disruptions caused by the September 11 attacks – only in the third quarter of 2001.

[7] This is based on a widely accepted definition of recession as a decline in real GDP in two consecutive quarters (compared with the preceding quarter).

[8] NBER, *The Business Cycle Peak of March 2001*, 26 November 2001 (www.nber.org).

[9] This relates to the short-term macroeconomic effects only and does not take into account the potential longer-term implications of higher business and government expenditures on security, which channel financial funds from investment to less productive uses.

TABLE 1.1.2

Quarterly changes in real GDP, 2001QI-2002QII
(Percentage change over previous quarter)

	2001				*2002*	
	QI	*QII*	*QIII*	*QIV*	*QI*	*QII*
France	0.3	-0.1	0.5	-0.5	0.5	0.5
Germany	0.6	–	-0.2	-0.3	0.3	0.3
Italy	0.6	0.1	0.1	-0.2	0.1	0.2
United Kingdom	0.5	0.6	0.3	0.1	0.1	0.6
Canada	0.2	0.1	-0.1	0.7	1.5	1.1
United States	-0.2	-0.4	-0.1	0.7	1.2	0.3
Japan	1.0	-1.2	-0.7	-0.7	–	0.6
Total above	0.3	-0.3	-0.1	0.2	0.7	0.4
Memorandum items:						
Euro area	0.5	–	0.2	-0.3	0.4	0.4
European Union	0.5	0.1	0.2	-0.2	0.3	0.4
Western Europe [a]	0.5	0.1	0.2	-0.2	0.3	0.4
Total industrialized countries [b]	0.3	-0.3	–	0.1	0.7	0.4

Source: National statistics; Eurostat, New Cronos Database.

Note: Data are seasonally adjusted.

[a] European Union plus Norway and Switzerland.

[b] Western Europe, North America and Japan.

in real disposable incomes and a rise in the savings ratio. Business fixed investment in equipment and software edged upward, following six consecutive quarters of decline. The rate of expansion of residential investment slowed significantly. Overall, the United States housing market has remained quite robust through September 2002, supported by historically low mortgage rates. In fact, the continued rise in house prices has to some extent offset the negative wealth effects stemming from the sharp drop of equity prices. A strong rebound in real exports of goods and services in the second quarter was more than offset by a surge in real imports. As a result, changes in real net exports continued to be a drag on overall domestic economic activity (table 1.1.3).

The changes in trade volumes in combination with the relative price changes of exports and imports led to a surge of the United States merchandise trade deficit to $122.6 billion in the second quarter of 2002, up from $106.4 billion in the preceding quarter. The current account deficit rose to a level corresponding to 5 per cent of GDP in the second quarter, up from 4.4 per cent in the preceding period.

The available short-term indicators point to only moderate growth in economic activity in the third quarter. Consumer confidence fell in each consecutive month between May and September 2002 (chart 1.1.2) against the background of turbulent equity and weak labour markets. Personal consumption expenditures virtually stagnated in August, when there was also a slight fall in industrial output compared with July. Despite its steady rise during the first seven months of the year, industrial production in August was just 0.4 per cent higher than in the same month of 2001 (chart 1.1.3). Capacity utilization rates in manufacturing industry broadly stagnated between June and August and were more than 10 percentage points below their previous high in 1988-1989 and more than 6 percentage points below the average of 1967-2001. Furthermore, the Institute for Supply Management (ISM) index fell below the threshold level of 50 per cent in September, indicating that manufacturing activity was generally contracting (chart 1.1.2). This was accompanied by declines in the index of leading business cycle indicators in July and August, which also signal weakening economic conditions.

Against this background, inflation in the United States has been modest throughout 2002, fluctuating between a monthly low of 1.1 per cent at the beginning of the year and 1.7 per cent in August. The decline in consumer price inflation in 2002 in comparison with 2001 is largely the result of a moderating trend in services inflation and falling energy prices. Core inflation was below 2.5 per cent in August (chart 1.1.4). In the same month, the producer price index was 1.5 per cent lower than in August 2001.

In the labour markets, the fall in non-farm employment during 2001 bottomed out in early 2002 but this has been followed by only a moderate upturn in recruitment. Job gains in construction, services and government were largely offset by losses in manufacturing and retail trade. The monthly unemployment rate stood at 5.7 per cent in August 2002, down from 6 per cent in April (chart 1.1.5).

The sharp cyclical downturn was accompanied by a considerable slowdown in labour productivity growth in 2001: output per hour in the non-farm business sector rose by only 1.1 per cent, in contrast to 2000 when it increased by 2.9 per cent. The quarterly pattern of productivity growth in the first two quarters of 2002 was similar to that for output, a strong rebound in the first quarter being followed by a marked slowdown in the second. Growth in compensation per hour edged up in 2002, but this was offset by the gains in labour productivity. Despite some upward tendency during the first two quarters of 2002, unit labour costs in the first half of 2002 were still some 2.5 per cent lower than a year earlier.

Against the background of weaker economic growth and increased uncertainty about short-term economic prospects, the very accommodative stance of United States monetary policy has so far remained unchanged in 2002. Since December 2001, the target for the federal funds rate has been 1.75 per cent, marking the lowest short-term interest rate in 40 years. Consequently (three-month) short-term interest rates in the money market remained broadly unchanged during the first nine months of 2002 (chart 1.1.6). Real short-term interest rates (based on the total CPI) were only about 0.5 per cent in the third quarter of 2002. Moreover, overall, monetary conditions were further eased by the real effective depreciation of the dollar. The fall in long-term

TABLE 1.1.3

Changes in GDP and main expenditure items, 2002QI-2002QII

	Western Europe				*United States*		*Japan*		*Western Europe, North America and Japan*	
	Total [a]		*Euro area*							
	QI	*QII*	*QI*	*QII*	*QI*	*QII*	*QI*	*QII*	*QI*	*QII*
Percentage change over preceding quarter, seasonally adjusted										
Private consumption	–	0.5	-0.2	0.3	0.8	0.4	0.5	0.3	0.4	0.5
Government consumption	1.0	–	0.8	0.4	1.4	0.4	0.3	0.6	1.0	0.2
Gross fixed investment	-1.0	-0.3	-0.6	-0.7	-0.1	-0.2	-1.7	-0.8	-0.7	-0.3
Final domestic demand	–	0.2	-0.1	0.1	0.7	0.3	-0.1	0.1	0.3	0.3
Total domestic demand	0.2	0.2	0.1	0.2	1.5	0.7	-0.5	0.3	0.7	0.5
Exports	-0.1	1.9	-0.2	1.8	0.9	3.4	4.8	5.7	0.5	2.3
Imports	-0.4	1.2	-0.9	1.3	2.1	5.1	–	2.6	0.3	2.4
GDP	0.3	0.4	0.4	0.4	1.2	0.3	–	0.6	0.7	0.4
Contribution to real GDP growth over preceding quarter, percentage points										
Private consumption	–	0.3	-0.1	0.2	0.5	0.3	0.3	0.2	0.3	0.3
Government consumption	0.2	–	0.2	0.1	0.3	0.1	–	0.1	0.2	–
Gross fixed investment	-0.2	-0.1	-0.1	-0.1	–	–	-0.4	-0.2	-0.1	-0.1
Final domestic demand	–	0.2	-0.1	0.1	0.8	0.3	-0.1	0.1	0.3	0.3
Stockbuilding	0.2	-0.1	0.2	0.1	0.7	0.3	-0.4	0.2	0.3	0.2
Total domestic demand	0.2	0.2	0.1	0.2	1.5	0.7	-0.5	0.3	0.7	0.5
Net exports	0.1	0.3	0.2	0.2	-0.2	-0.3	0.5	0.4	–	–
Exports	-0.1	0.7	-0.1	0.7	0.1	0.3	0.5	0.6	0.1	0.5
Imports	0.2	-0.4	0.3	-0.5	-0.3	-0.7	–	-0.2	-0.1	-0.5

Source: National statistics; Eurostat, New Cronos Database.

[a] Seventeen countries: EU-15 plus Norway and Switzerland.

interest rates since May 2002 (see below), which became more pronounced in the third quarter of 2002, should, in principle, bolster interest sensitive demand.

The stance of United States fiscal policy has also remained quite loose in 2002, reflecting the combined impact of the tax cuts enacted in June 2001 and a surge in government expenditures, partly related to the combat of terrorism and military action in Afghanistan. Moreover, weakening economic activity has led to a sizeable shortfall in tax revenues. As a result, the general government budget deficit is estimated to have reached a level corresponding to 2.6 per cent of GDP in 2002, up from 0.2 per cent in 2001. The structural balance is estimated to have moved into deficit corresponding to 1.9 per cent of GDP, a swing of 2 percentage points from 2001.[10] There has also been a substantial deterioration in the medium-term fiscal outlook.

Robust growth in Canada

In *Canada*, economic growth was very robust in the first two quarters of 2002, and was much stronger than anticipated given the weaker growth in the United States, its major trading partner. The pace of economic expansion moderated to a still very strong rate of 1.1 per cent in the second quarter after an increase of 1.5 per cent in the first, equivalent to a seasonally adjusted annual rate of 6.1 per cent. In both the first and second quarters of 2002 this was the highest rate of growth among the G-7 economies. Economic growth continued to be underpinned by strong private household spending on consumer durables, reflecting rising disposable incomes resulting from large employment gains and a 12-year high in consumer confidence. These factors, in combination with low mortgage rates, also help to explain the continued buoyancy of the housing market. Business confidence has also improved and this was reflected in an upturn of spending on machinery and equipment. But export growth weakened in the second quarter, while import demand remained strong as a result of domestic demand. Core inflation reached 2.5 per cent in August 2002, drifting towards the upper limit of the central bank's target range of 1 to 3 per cent. Against the background of rapid economic growth and high and rising capacity utilization rates, the Bank of Canada twice raised official interest rates by a quarter of a percentage point in June and July 2002. In early September, the central bank left its key interest rates unchanged, reflecting a trade-off between potential inflationary risks associated with robust domestic demand, especially in the market for housing, and concerns about the effects of enduring economic weakness in the United States on Canada.

Japan continues to struggle with deflation and non-performing loans

In *Japan*, revised data show an increase in real GDP by 0.6 per cent in the second quarter compared with the first quarter, when economic activity stagnated. Exports, stimulated by increased demand in other Asian markets

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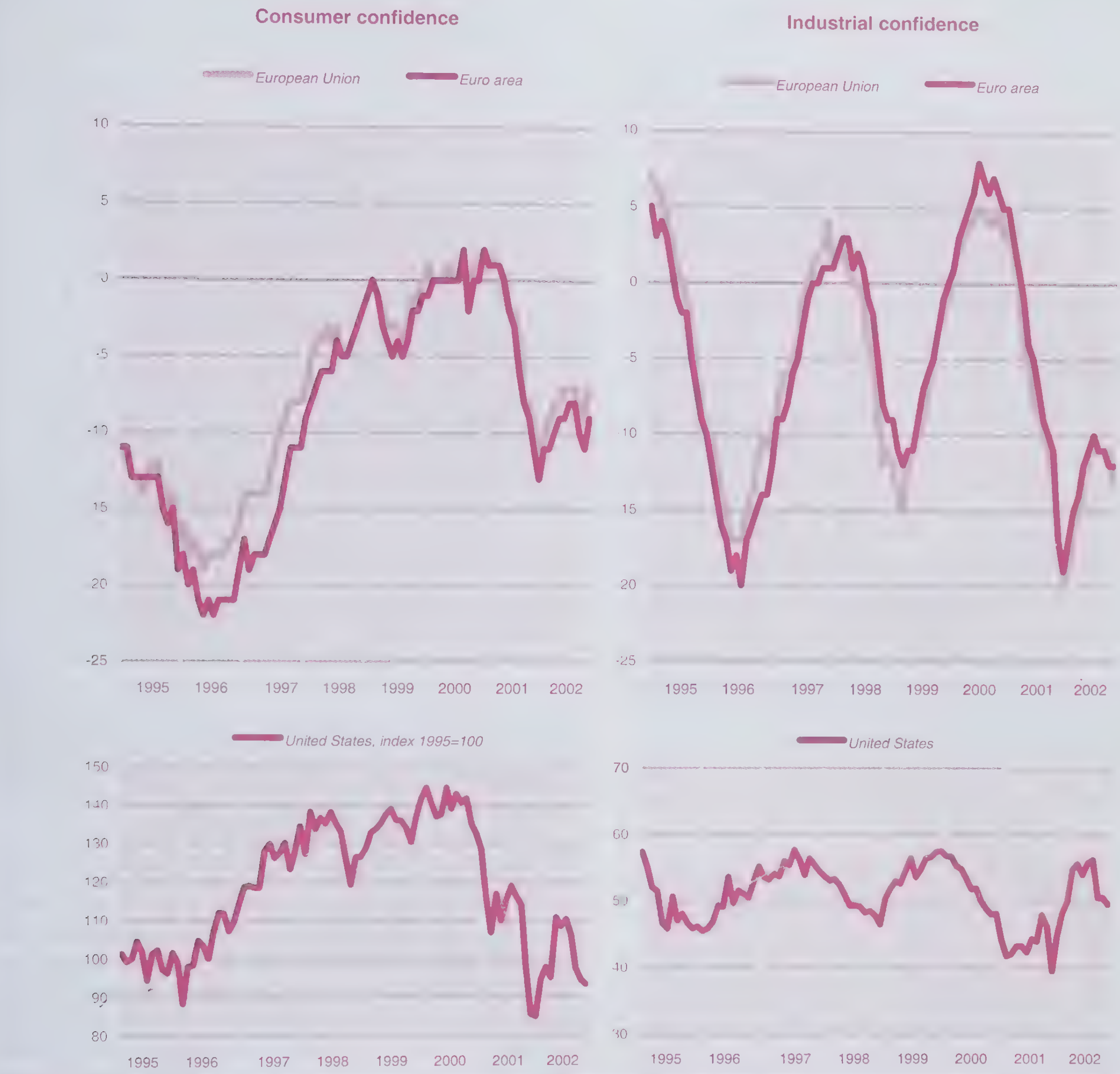
[10] IMF, op. cit., p. 15, table 1.5

CHART 1.1.2

Business and consumer surveys in the European Union and the United States, January 1995-September 2002
(Indices, per cent, seasonally adjusted)



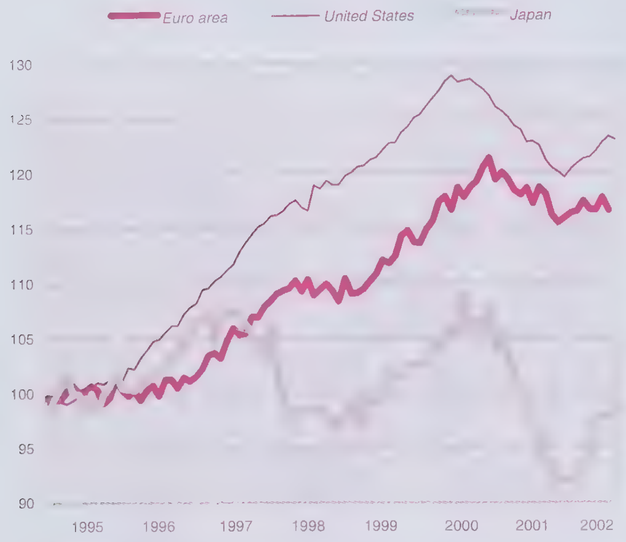
Source: European Union, euro area: Commission of the European Communities, *European Economy*, Supplement B (Luxembourg), various issues and direct communications. United States: consumer confidence (index 1995=1995) compiled by the Conference Board (www.conference-board.org); industrial confidence is measured by the ISM index and compiled by the Institute for Supply Management (www.ism.org).

and the United States and by the sizeable real effective depreciation of the yen since autumn 2001, were the main source of growth in the first half of 2002. Moderate growth in private consumption expenditures was offset by further declines in fixed investment. But the appreciation of the yen against the dollar in 2002 has partly reversed the earlier gains in competitiveness. The strong growth of exports during the first half of 2002 led to a steady rise in industrial production, which in August was 3.2 per cent higher than 12 months earlier (chart 1.1.3). Deflationary pressures have persisted, with both consumer and wholesale prices continuing to fall. Equity prices in September came close to their lowest level in two decades. The unemployment rate in July 2002 was 5.4 per cent, close to the record level of 5.5 per cent reached seven months earlier.

Economic performance continues to be restrained by the lingering crisis of the financial system caused by the considerable amount of non-performing loans held by the banks. The Japanese authorities have indicated that they intend to take more decisive action to tackle these problems. The Bank of Japan announced in September that it would buy shares held by banks in order to strengthen their balance sheets and inject liquidity into

CHART 1.1.3

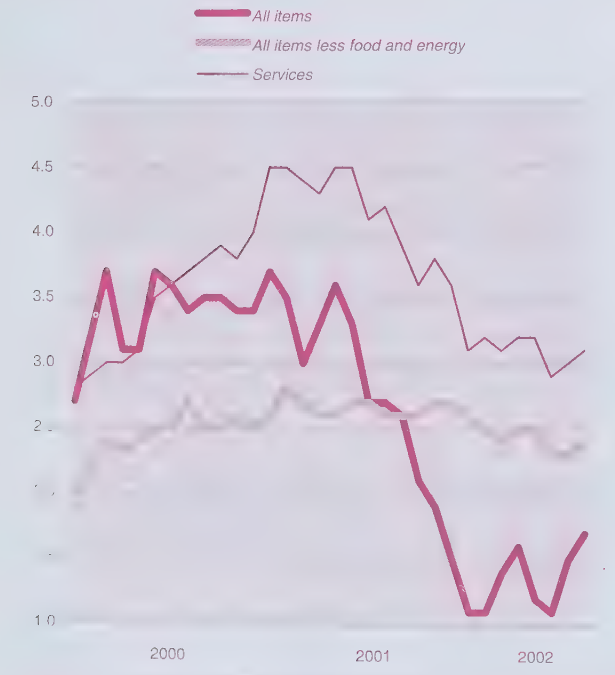
Monthly level of industrial output, January 1995-August 2002
(Indices, 1995=100)



Source: OECD, *Main Economic Indicators* (Paris), various issues; Eurostat, New Cronos Database.

CHART 1.1.4

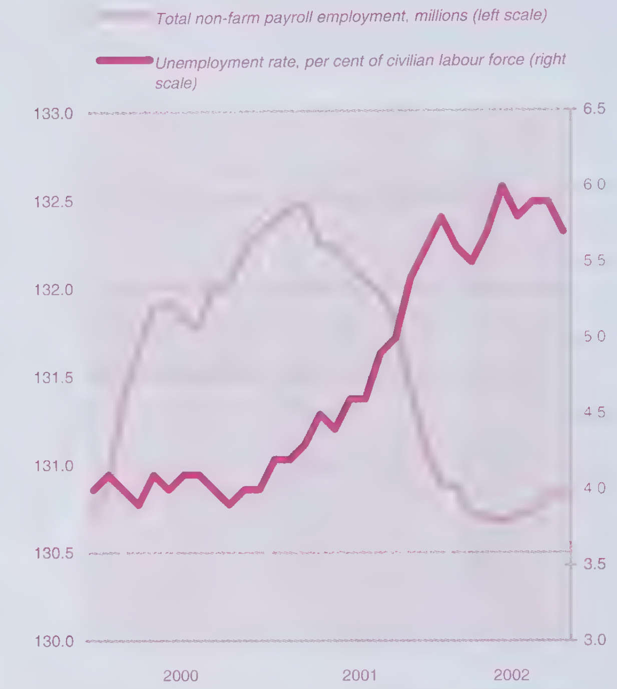
Consumer prices in the United States, January 2000-August 2002
(Percentage change over same month of preceding year, United States city average, seasonally adjusted)



Source: Bureau of Labor Statistics (Washington, D.C.) (www.bls.gov).

CHART 1.1.5

United States labour market, January 2000-August 2002
(Thousands, per cent)



Source: As for chart 1.1.4.
Note: Data are seasonally adjusted.

the financial system. However, concrete details of these plans are not yet known or finalized. Such a measure is unlikely to be sufficient to solve the balance sheet problems of the banking system, which may require more direct measures, including the use of public funds to recapitalize financial institutions and additional expansionary measures to arrest deflation.

Ebbing capital inflows hit Latin America and Turkey

The large falls in equity prices in the industrialized countries, concerns regarding corporate governance and the worsening of the international economic outlook have all helped to erode the confidence of investors in the international financial markets and to heighten their risk aversion. This has led to the avoidance of riskier investments, including those in emerging markets.[11] This trend has been further reinforced by economic turbulence and political uncertainties in South America, the Middle East, Turkey and more recently in Asia. As a result, net private flows to emerging markets are forecast to fall slightly in 2002 to $123 billion down from $126 billion in 2001 and one third below the net inflows of 2000. These figures are well below the average of $187 billion in the 1992-2002 period.[12] The downturn has affected mainly portfolio, bond and loan flows, which are usually very volatile. Even FDI flows into emerging markets – which

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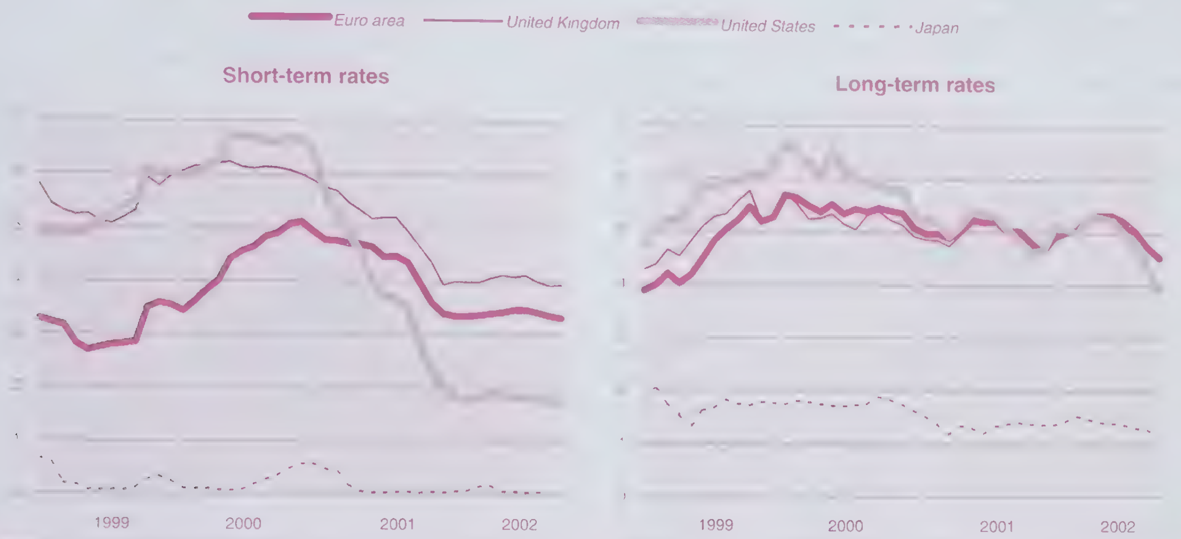
[11] IMF, *Global Financial Stability Report* (Washington, D.C.), September 2002.

[12] IIF, *Capital Flows to Emerging Market Economies* (Washington, D.C.), 18 September 2002 (www.iif.com).

CHART 1.1.6

Short-term and long-term interest rates in the euro area, Japan, the United Kingdom and the United States, January 1999-September 2002
(Per cent per annum)



Source: OECD, *Main Economic Indicators* (Paris), various issues; European Central Bank (www.ecb.int); United States Federal Reserve (www.federalreserve.gov).

have been relatively more stable throughout the financial turbulence of recent years – are expected to fall by 16 per cent in 2002 from their level in 2001. However, the aggregate figures mask strong differences among regions. There were large increases in net private capital flows to central and east European countries,[13] which contrast with more moderate increases to emerging Asia and a substantial fall (by one third) in flows to Latin America. This will have a significant adverse impact on the latter region, which is strongly dependent on foreign capital.

In *Latin America*, the combination of an external financing shortfall, falling exports, domestic financial turmoil and contagion from the Argentine crisis is forecast to lead to a 0.8 per cent fall in real GDP in 2002.[14] In South America some countries have suffered from a mutually reinforcing combination of financial market turbulence and political uncertainty. This has led domestic and international investors to dispose of their assets in these countries, thereby contributing to the fall of share and international bond prices (thus raising the international financing costs) and to the depreciation of domestic currencies, accompanied by rising domestic interest rates. In many cases, this situation has increased the difficulties of managing the public finances and raised the prospect of default, which is partly generated by self-fulfilling expectations. The economic situation of Argentina deteriorated strongly after it defaulted on its foreign debt and abandoned its currency board in December 2001. Unemployment and poverty rose sharply and inflation soared, causing real incomes to tumble. The sharp fall in domestic demand is expected to lead to a collapse of GDP of some 15 per cent in 2002 (compared with 2001). The country has not been able to renegotiate its foreign debt with either private creditors or multilateral institutions. The Argentine crisis has had a strong impact on neighbouring Brazil, Paraguay and Uruguay and, to a lesser extent, Chile. In Brazil, contagion from the Argentine crisis has added to the uncertainties arising from the outcome of the elections of October 2002 and surrounding the economic policies to be adopted by the new government. These have come on top of market concerns regarding the sustainability of the country's public and foreign debt. All these factors have led to turbulent financial markets, which have in turn, contributed to a near 40 per cent depreciation of the real during the first three quarters of 2002. In these circumstances, economic growth has, not surprisingly, slowed sharply. In order to strengthen the country's capacity to contain financial instability and to prevent further contagion of other emerging markets, in August 2002 the IMF authorized its largest loan package ever, $30 billion, to Brazil, but even this was not enough to restore stability. Market concerns are unlikely to be subdued until the new government introduces a credible policy to deal with the country's financial market troubles and debt difficulties.

Turkey made progress during the first three quarters of 2002 in implementing the adjustment programme agreed with the IMF. However, since May 2002 the economy has been shaken by political instability and by uncertainties concerning the outcome of the November general election. These have raised concerns regarding the future course of economic policy, as well as the sustainability of public debt. These, in turn have led to financial market turbulence, with currency depreciation, falling equity markets and a rise in domestic interest rates and international financing costs. Nevertheless, the annual rate of consumer price inflation fell from 73 per cent in January to 37 per cent in September, although the deceleration partly reflects a statistical base effect. Despite financial market instability, the adjustment programme targets for 2002 may be achievable; real GDP growth is forecast to reach nearly 4 per cent, reflecting a recovery from the deep recession of 2001 (table 1.3.1).

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[13] Sect. 1.2 below.

[14] ECLAC, *Current Conditions and Outlook* (Santiago), August 2002.

Developing Asia in the first half of 2002 was recovering from the slump of the previous year, when it was affected by the slowdown in international trade in ICT products. The pick-up in growth has been based on exports and domestic demand, boosted by private consumption, as fixed investment has lagged behind. As the region enjoys large current account surpluses, it has been little affected by the retrenchment in capital flows to emerging markets. Regional GDP growth is forecast to accelerate to 5 per cent in 2002 (up from 3.7 per cent in 2001), driven by the Chinese and the South Korean economies, which are expected to expand by 7.4 per cent and 6 per cent, respectively.[15]

Oil prices rise strongly on the back of heightened geopolitical risks

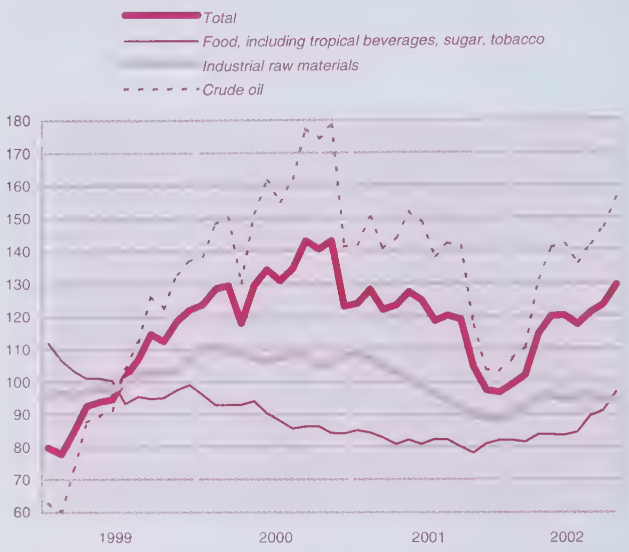
Commodity prices rebounded strongly between January and September 2002, again a recovery from the slump during the second half of 2001 (chart 1.1.7). Although the trend was driven by oil prices, other commodities also benefited from expectations – during the first half of 2002 – from an early pick-up in world economic activity. Between December 2001 and September 2002, the prices of energy products and of non-energy commodities rose by 47 per cent and 10 per cent, respectively.

Having touched a low of $18 per barrel (spot price of Brent crude) in January 2002, petroleum prices fluctuated around $25 between April and June, well within OPEC's target range of $22-$28 per barrel. They rose even further during the following three months reaching $30, their highest level in over a year. This recent rise reflects, to a large extent, a geopolitical risk premium on account of the uncertainties generated by the prospects of a war in Iraq and, to a lesser extent, market developments. In the absence of unforeseen developments (such as a sustained supply disruption), oil prices are expected to remain at their September level of around $28.5 for the remainder of the year.

Prices of industrial raw materials recovered in early 2002 in anticipation of a global economic recovery during the second half of the year, a tendency that was supported by closures of some metal producing plants. However, prices have stagnated since, as expectations about economic prospects started to weaken. Food commodity prices, however, increased more strongly and in August 2002 were 17 per cent above their trough in October 2001.

CHART 1.1.7

World commodity prices, January 1999-September 2002
(Indices, 1999=100)



Source: Hamburg Institute for Economic Research (HWWA).

Note: Indices calculated on the basis of current dollar prices. Commodity weighting according to the share of these products in imports of industrialized countries in 1989-1991.

The dollar depreciates against major currencies

In the foreign exchange markets, the dollar depreciated markedly against the euro after February 2002. It dropped from a monthly average of $0.87/€ in February to $0.98/€ in September, corresponding to an appreciation of the euro by some 12.5 per cent (chart 1.1.8). In July the exchange rate briefly exceeded parity, reaching $1.02/€. This compares with an average monthly value of $1.16/€ in January 1999. The dollar weakened also vis-à-vis the Japanese yen, which appreciated from an average monthly low of Y134/$ in February to Y121/$ in September 2002, corresponding to a dollar depreciation of some 10 per cent. In contrast, the yen/€ exchange rate fluctuated within a range of Y114/€ to Y119/€ during the first nine months of this year. At the end of September, the euro had appreciated by 3.2 per cent against the yen compared with the end of March.

The dollar's decline appears to have been primarily caused by doubts about the relative strength of the United States recovery and concerns about business profitability as well as corporate governance scandals. Moreover, concerns about the possibility of a military conflict with Iraq may have also played a role. In nominal effective terms, i.e. based on a weighted average of the foreign exchange values of the dollar against the currencies of a

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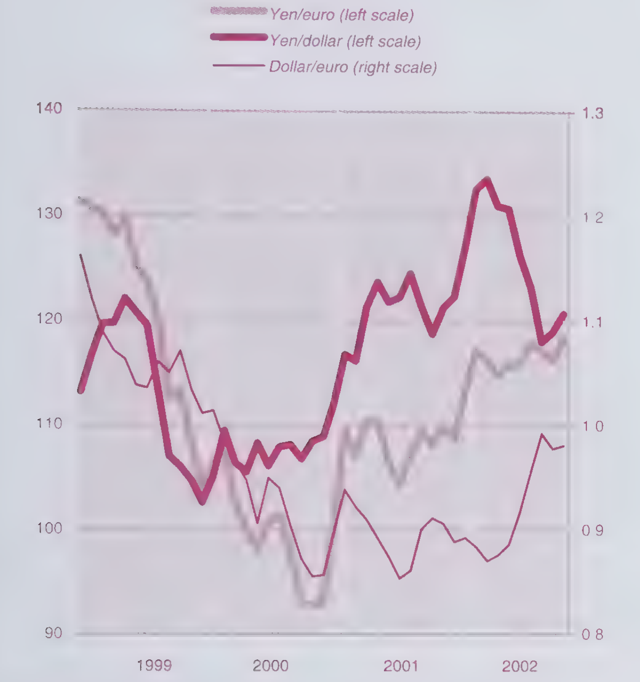
[15] Asian Development Bank, *Asian Development Outlook 2002. Update* (Manila), September 2002 (www.adb.org).

CHART 1.1.8

Bilateral exchange rates between the euro, the dollar and the yen, January 1999-September 2002
(Currencies)



Source: Eurostat, New Cronos Database and UNECE calculations.
Note: Data refer to average value in month.

large group of major United States trading partners, the dollar depreciated to only 2.8 per cent between February and September 2002. However, against the basket of major currencies the nominal effective exchange rate fell by 7.5 per cent over the same period. The corresponding appreciation of the euro's nominal effective exchange between February and August 2002 (latest data available at the time of writing) amounted to 6.9 per cent. Over the same period, the nominal effective exchange rate of the yen rose by 7.3 per cent.

(ii) Western Europe

Euro area recovery remains subdued

In the *euro area*, the recovery continued at a subdued pace during the second quarter of 2002. Real GDP rose by 0.4 per cent (table 1.1.2) and was only 0.7 per cent above its level one year earlier (chart 1.1.9). Compared with the first quarter of 2001, there was an upturn in private consumption expenditures, which had been very weak since the third quarter of 2001. This rise was supported by a decline in inflation and gains in aggregate incomes. But these impulses were partly offset by a further significant fall in gross fixed investment in the face of a worsening economic outlook. In fact, this was the sixth consecutive quarterly decline of fixed investment, amounting to a cumulative reduction of some 4 per cent. Changes in stockbuilding continued to provide moderate support to economic activity. The combined effect of these changes was a mild strengthening of domestic demand, which rose by 0.2 per cent in the second quarter (table 1.1.3). As in the first quarter, changes in real net exports supported overall economic growth. Real exports rose at their strongest pace in one and a half years, but this was largely offset by a recovery of imports, which had fallen steadily, by a cumulative 5.5 percentage points, in the five preceding quarters.

Industrial production recovered slightly during the first half of 2002, having fallen throughout 2001 (chart 1.1.3). This upturn was partly due to the improvement in export orders for manufactured goods. Nevertheless, in the second quarter of 2002, industrial output was still some 1 per cent lower than in the corresponding period of 2001. Capacity utilization in the manufacturing sector was 80.8 per cent in April-June 2002, unchanged from the preceding three-month period but below its recent peak of 84.6 per cent during the fourth quarter of 2000.

Partial and preliminary evidence for the third quarter of 2002 point to a further weakening of economic activity. The OECD composite index of leading business cycle indicators for the euro area fell in June and July and consumer and industrial confidence has weakened since the second quarter (chart 1.1.2). The Reuters eurozone composite output index, an indicator of overall private sector economic growth, fell in September 2002 for the third consecutive month to a level signalling output contraction for the first time since December 2001. In addition, the Ifo business climate index, a key cyclical indicator in Germany, fell in September for the fourth consecutive month.

Inflation remains moderate

Inflation in the euro area was 2.1 per cent in August, up from 1.8 per cent in June but down from 2.7 per cent in January 2002. Core inflation fell below 2.5 per cent in the summer (chart 1.1.10). The volatility in the headline monthly inflation rate reflects the impact of temporary factors such as the "rounding up of prices" after the introduction of euro notes and coins at the beginning of the year and the pass-through of higher prices for fresh food and energy. In the aggregate, goods price inflation fell to very low levels during the first eight months and the tendency for the prices of services to rise appears to have abated or even to have been arrested in late summer, pointing to a further easing of inflationary pressures. The deterioration in economic prospects is likely to bring about a further moderation of inflation in the months ahead, unless there is a further rise in oil prices. Producer prices were flat in the period May-August 2002. The euro's appreciation during 2002 should also have a dampening effect on inflation. Recent polls of consumer price forecasts are for an average annual inflation rate of 2.2 per cent in 2002 and 1.6 per cent in 2003.[16]

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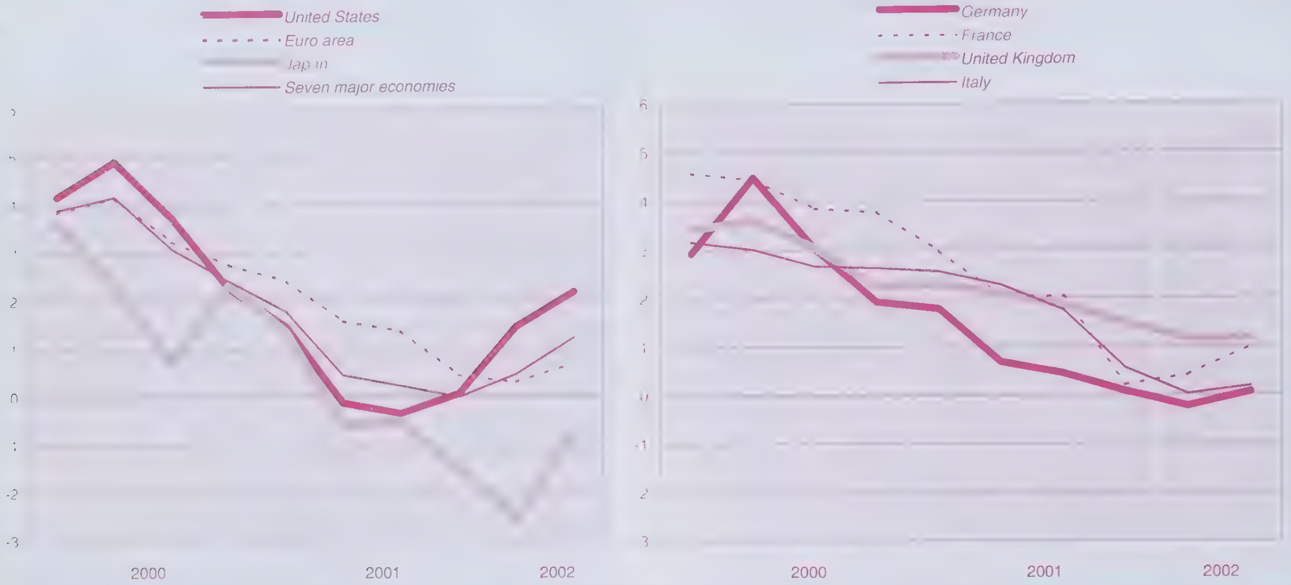
[16] As reported in *The Economist*, 5-11 October 2002, p. 108.

CHART 1.1.9

Quarterly changes in real GDP in the developed market economies, 2000QI-2002QII
(Percentage change over same period of previous year)



Source: National statistics; Eurostat, New Cronos Database.
Note: Based on seasonally adjusted data. Seven major economies: Canada, France, Germany, Italy, Japan, United Kingdom and the United States.

Labour markets prove resilient

The economic slowdown has taken only a modest toll on the euro area's labour markets (chart 1.1.11). The marked upward tendency in employment levels since 1997 petered out into broad stagnation in the first half of 2002. The pronounced fall in the unemployment rate since 1997 bottomed out at 8 per cent between February and October 2001 and was partly reversed thereafter. In July 2002, the average unemployment rate had edged up to 8.3 per cent. Growth of labour productivity in the whole economy has slowed down progressively since mid-2000, reflecting to a large extent the lagged adjustment of labour to changes in output. Labour productivity actually fell by nearly 1 per cent in the first quarter of 2002 compared with the same period of 2001. This, in combination with rising levels of compensation per employee, led to upward pressures on unit labour costs, which rose year-on-year by nearly 4 per cent in the first quarter of 2002. This tendency, however, should be reversed as labour input is adjusted to changing production expectations and, later on, once output has started to recover. In any case, in the current weak economic environment firms will have only limited possibilities to pass on these higher costs to the consumer and will instead have to accept a fall in unit profits.

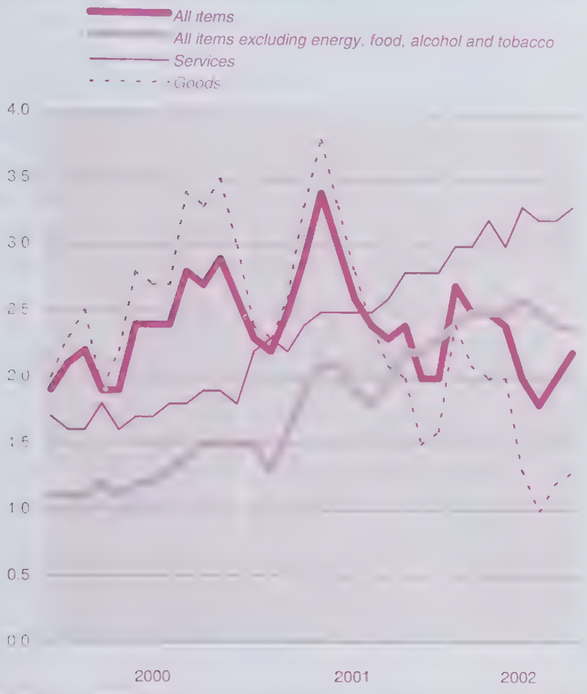
The three major euro area economies suffer from weak fixed investment

Among the three major economies of the euro area, real GDP in *Germany*, expanded at a moderate rate of 0.3 per cent in the first two quarters of 2002. A major reason for the persistently poor overall economic performance is the weakness of private consumption and fixed investment. The support of economic growth in the second quarter of 2002 was a marked swing in inventory investment. Export growth also strengthened somewhat, but this was more than offset by a rise in imports, i.e. real net exports subtracted slightly from overall economic growth in the second quarter. Moderate economic growth was accompanied by falling employment and rising unemployment. Industrial orders fell in July for the second consecutive month. Manufacturing output had recovered somewhat during the first quarter of 2002, but declined by 1 per cent between June and July, falling back to its level of January 2002. Economic performance in the third quarter was adversely influenced by the devastating floods in several regions, but the overall impact is currently difficult to gauge. Consumer price inflation has been hovering around 1 per cent between May and August 2002, about 1 percentage point lower than the average rate for the euro area. This is reflected in above average real interest rates as compared with other member states of the euro area.

In *France*, real GDP rose by 0.5 per cent in both the first and second quarters of 2002 (table 1.1.2), the best performance among the large economies of the euro. This largely reflects robust increases in private and government consumption expenditures. In contrast, the growth of fixed investment weakened markedly in the second quarter, and inventory investment also brought down the growth rate. But the weakness in investment was partly offset by the growth of exports. In fact, the

CHART 1.1.10

Consumer prices [a] in the euro area, January 2000-August 2002
(Percentage change over same month of preceding year)

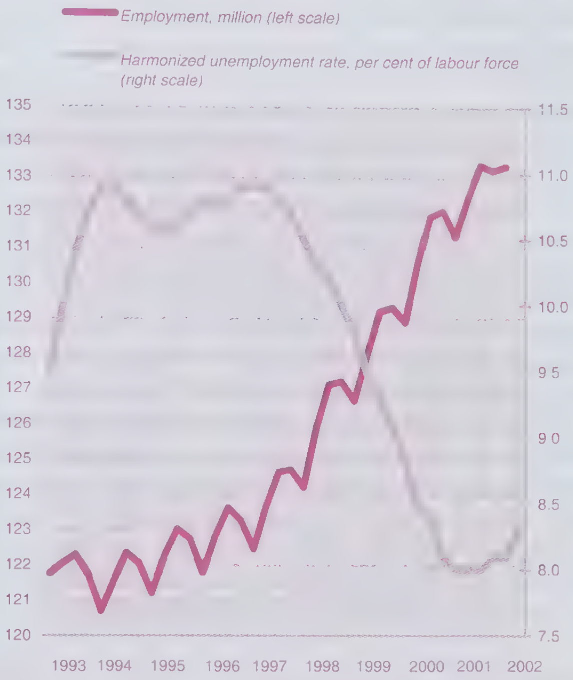


Source: Eurostat, New Cronos Database.

[a] Harmonized Index of Consumer Prices (HICP).

CHART 1.1.11

Euro area labour market, 1993QI-2002QI
(Millions, per cent of civilian labour force)



Source: Eurostat, New Cronos Database and European Central Bank.

Note: Employment data are not seasonally adjusted. The unemployment rate is seasonally adjusted. Available only until 2001QIV. Value for 2002QI based on UNECE calculations.

increase in real net exports was the mainstay of economic activity in the second quarter. Industrial production fell, with declines in both the manufacturing and energy sectors. Manufacturing output shrank by 1 per cent in July, falling back to its level of December 2001. More generally, economic conditions deteriorated in the third quarter of 2002 amidst a weakening of industrial and consumer confidence and rising unemployment.

In *Italy*, real GDP rose by 0.2 per cent in the second quarter of 2002, only slightly more than in the preceding quarter. Total domestic demand stagnated in the second quarter, and the meagre rate of expansion was entirely due to the change in real net exports. Private consumption edged up, but fixed investment fell for the third consecutive quarter. Between April and June 2002 industrial output plunged to its lowest level in almost three years. Industrial and consumer confidence deteriorated in the third quarter.

Among the smaller economies of the euro area for which second quarter 2002 national accounts data were available at the time of writing, economic growth edged up in *Austria* supported by moderate gains in total domestic demand, but mainly because of stronger real net exports. Similarly, in *Finland*, a rebound in economic growth in the second quarter (after falling real GDP in the two preceding quarters) reflected mainly an increase in real net exports. On the domestic demand side, a strengthening of consumption and fixed investment was largely offset by falls in inventory accumulation. In the *Netherlands*, economic growth continued to be weak in the first two quarters of 2002. Domestic demand stagnated in the second quarter, with fixed investment declining. The effect of a rise in exports on activity was largely offset by a parallel increase in imports.

In *Spain*, private and government consumption rose moderately in the second quarter but fixed investment remained relatively robust. But these impulses were fully offset by a swing in inventory investment. In sum, total domestic demand stagnated in the second quarter. But real exports picked up, while imports continued to decline: as a result, the increase in real GDP by 0.4 per cent in the second quarter of 2002 was entirely due to changes in real net exports.

(iii) Monetary and fiscal conditions in the euro area

Monetary stance remains unchanged despite deteriorating growth prospects

In the light of the moderate recovery from the cyclical downturn in 2001 and low inflationary expectations, the ECB has so far held its main refinancing rate unchanged at 3.25 per cent in 2002.[17] Growth of the money supply has remained above the reference value of 4.5 per cent: in June-August 2002, M3 rose at an average rate of 7.1 per cent compared with the same period of 2001. But this strong growth reflected mainly the increasing economic uncertainty, which triggered portfolio shifts towards financial assets included in M3. Such shifts were also encouraged by the low opportunity costs of holding M3 assets. In fact, in the money market, three-month interest rates (EURIBOR) edged up slightly from an average of 3.34 per cent in January to 3.47 per cent in May 2002. But there was a decline by 15 basis points to 3.31 per cent in the period until September (chart 1.1.6). The magnitudes of the initial rise and subsequent decline of money market rates between January and September increased along the maturity spectrum. Thus, for 12-month funds, there was a decline of 72 basis points between May and September, more than reversing the increase of 48 basis points between January and May 2002. This downward tendency of money market rates reflected a progressive shift in market expectations that the anticipated strengthening of the recovery would not materialize and that, accordingly, the stance of monetary policy would not be tightened. Consequently, market expectations shifted towards an easing of monetary policy in response to the deteriorating economic prospects.

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[17] The main refinancing rate was lowered by half a percentage point to 3.25 per cent on 9 November 2001.

The profile of changes in long-term interest rates (yields on 10-year government bonds) reflects broadly the same evolution in market expectations in the period up to September 2002 (chart 1.1.6). But changes in yields were also influenced by portfolio adjustments triggered by investors' concerns about corporate accounting scandals and, in August and September, by the turbulence in stock markets, which led investors to prefer government bonds as safe havens. In the euro area, average long-term yields fell from 5.32 per cent in March to 4.76 per cent in September. This decline was less pronounced than in the United States where comparable yields fell from 5.28 per cent to 3.94 per cent over the same period. Thus, over a period of six months a yield gap of 82 basis points has emerged between euro-denominated and dollar-denominated 10-year government bonds. In late September 2002, United States long-term interest rates fell to their lowest level since the early 1960s.

Changes in overall monetary conditions reflect the combined impact of changes in real short-term interest rates and the real effective exchange rate. Real short-term interest rates in the euro area increased in the first eight months of 2002, reaching 1.5 per cent in August, slightly less than they were a year earlier. Combined with an appreciation of the real effective exchange rate of the euro by some 5 per cent over the same period, this suggests some tightening of monetary conditions in the euro area, somewhat offsetting the accommodative stance of monetary policy.

Widening fiscal deficits put pressure on the Stability and Growth Pact

Weaker than expected economic growth has negatively affected net fiscal revenues with the consequence that the budget deficit targets fixed in the national stability and convergence programmes for 2002 and 2003 will not be met by many countries. This is more problematic for France, Germany, Italy and Portugal, which currently have budget deficits that are still far off the balanced budget objective to be achieved by 2004. (The other euro area member countries already have budget positions that are close to balance or even in surplus.)

In fact, in view of the more moderate growth rates that are now forecast for 2002 and 2003, it is unlikely that the goal of being close to budget balance in these four countries can be achieved by 2004 except at the expense of large output losses associated with very restrictive fiscal policies.

Budgetary outcomes were already worse than expected in Germany and Portugal in 2001. In Germany, the general government budget deficit amounted to 2.7 per cent of GDP in view of an unexpected shortfall of tax revenues and higher than planned expenditures related to the labour market. Against this background the German government committed itself in early 2002 to achieve a balanced budget by 2004. But despite tight expenditure policies at all levels of government, the budget target for 2002 will be missed because of a considerable shortfall of tax revenues, largely reflecting adverse cyclical developments. In fact, current forecasts are for a general government budget deficit close to the 3 per cent ceiling fixed in the Stability and Growth Pact, and an even larger deficit cannot be excluded. The government will also have to shoulder the additional expenditures required to finance the repair of the severe damage caused by floods in several regions. In principle, a fiscal deficit above the 3 per cent ceiling that is due to "special circumstances", e.g. natural disasters such as floods, should not lead to the "excessive deficit procedure" being invoked. In any case, the German government has decided to postpone to 2004 a personal income tax cut of 1.5 per cent planned for 2003 and to raise corporate tax rates for 2004 by 1.5 percentage points in order to finance reconstruction projects in the affected regions.[18]

In Portugal, an audit of fiscal statistics by the new government revealed that the general government budget was in deficit to the extent of 4.1 per cent of GDP in 2001, which compares to an earlier estimate of 2.5 per cent. This makes Portugal the first country in the euro area to have an "excessive deficit" as defined in the Stability and Growth Pact.[19] To redress the situation the government has adopted austerity policies.

Budgetary outcomes will also be worse than planned (or targeted) in France and Italy in 2002 and

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[18] It should be noted that Austria was also severely affected by floods with similarly large reconstruction costs (corresponding to 0.5 per cent of GDP) as in Germany.

[19] The Commission adopted a report on government finances in Portugal in September 2002 as a first step in the Excessive Deficit Procedure.

2003, reflecting adverse cyclical factors but also the effects of tax cuts and additional expenditures. For France, a general budget deficit corresponding to some 2.5 per cent of GDP is currently expected for 2002 and possibly for 2003 as well. A budget deficit of more than 2 per cent of GDP is also forecast for Italy.

In the face of downgraded growth forecasts for 2002 and 2003 (as compared with those prepared in the spring of 2002) and the likely procyclical effects of restrictive polices in the current weak economic environment, the European Commission has proposed postponing the deadline for these four EU countries to meet the commitment of broadly balanced budgets by two years to 2006.[20] It was also proposed that the "close-to-balance" medium-term objective should take the effects of the business cycle into account; in other words, the target should be a balanced, cyclically adjusted general government budget, while at the same time the 3 per cent threshold for the actual financial balance remains a binding constraint. But countries that had not yet reached a cyclically adjusted balanced fiscal position are required to reduce the structural deficit by a minimum of 0.5 per cent of GDP every year.[21] At a meeting of euro area finance ministers in early October there was no agreement about the proposal to postpone the date for achieving "close-to-balance" budgets, but a broad majority was in favour of starting to reduce cyclically adjusted deficits by at least 0.5 per cent of GDP per annum as from 2003. This objective, however, risks running into the problem that restrictive fiscal policies, especially if pursued simultaneously by a group of large countries in an already weak economic environment, may have procyclical effects and therefore actually make fiscal positions worse.[22]

(iv) Other western Europe

United Kingdom experiences moderate growth but the surge in house prices remains a major concern

Outside the euro area, economic activity picked up in the *United Kingdom* in the second quarter of 2002, when real GDP rose by 0.6 per cent. This followed two quarters of only very moderate growth. In any case, this was the tenth year of uninterrupted quarter-to-quarter growth of GDP. The upturn in the second quarter largely reflects the continuing growth of private consumption, which was fuelled by strong earnings gains, continued increases in house prices and, partly related to the latter, increased household borrowing. Changes in real net exports also supported domestic activity, with strong gains in exports – reflecting the pick-up in international demand for ICT products – outpacing imports. In contrast, government consumption declined and fixed investment stagnated in the second quarter. Inventory changes also subtracted from overall economic growth. Short-term indicators currently available for the third quarter point to some slowing in the growth of retail sales. Also manufacturing activity remained weak. The second quarter of 2002 witnessed the sixth consecutive quarterly fall in manufacturing output – the longest decline in the postwar period – leading to a cumulative fall of 8 per cent. In July, manufacturing activity edged upward slightly to equal its level of April. The situation in the labour market was little changed, with insignificant gains in employment and an unemployment rate at 5.2 per cent in May-July 2002, a relatively low level. Nevertheless, wage cost pressures have remained weak. During the first eight months of 2002, the annual inflation rate (based on RPIX) remained well below the government's target ceiling of 2.5 per cent. The stance of monetary policy has remained unchanged since November 2001, when the base rate was lowered to 4 per cent. A major concern remains the rate of increase in house prices: this is regarded as unsustainable by the Monetary Policy Committee and may have influenced the decision to keep interest rates unchanged despite the deterioration in the short-term economic outlook. Industrial confidence weakened markedly in September 2002, but consumer confidence remained very strong.

Among the remaining member states of the European Union, the pace of economic activity in *Denmark* strengthened markedly in the second quarter of 2002 and in *Sweden*, it remained above the EU average. Outside the EU, growth also strengthened in *Norway* in the second quarter of 2002, in contrast to the first quarter when real GDP declined. Economic activity broadly stagnated in *Switzerland* in the first two quarters of 2002, with GDP actually falling in the first half of 2002 compared with the same period of 2001.

1.2 Eastern Europe, Baltic states and the CIS

Adjusting to the weakened global markets

Most transition economies managed to preserve some of their dynamism during the first half of 2002, defying concerns about a possible sharp downturn caused by the continuing weakness in the global and western European economies. Although the worst case scenario for the region as a whole has so far not materialized, there was a general moderation of the pace of growth in many countries. The aggregate GDP of the transition economies increased by 3.6 per cent year-on-year in the first half of 2002, 1.4 percentage points below the rate in 2001 (table 1.2.1). At the same time it is worth mentioning that the rates of GDP growth in most transition economies (in the majority of countries they were above 3 per cent) were considerably higher than those in western Europe in the same period. After a widespread slowdown in the first quarter of 2002, the pace of growth accelerated (in terms of year-on-year rates) in a number of transition economies during the second quarter.

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[20] *Financial Times*, 24 September 2002.

[21] European Commission, "Preparation of Eurogroup and Council of Economics and Finance Ministers, Luxembourg, 7-8 October 2002", *Press Releases Rapid*, Memo/02/205 (Brussels), 7 October 2002.

[22] For a more detailed discussion of the Stability and Growth Pact see UNECE, *Economic Survey of Europe, 2002 No. 1*, pp. 7-10.

TABLE 1.2.1

Real GDP in eastern Europe, the Baltic states and the CIS, 2000-2003

(Percentage change over previous year)

	Actual				Official forecast [a]	
		2001		2002		
	2000	Jan.-Jun. [b]	Full year	Jan.-Jun. [b]	2002	2003
Eastern Europe	3.8	3.0	2.9	2.4	2½	3¾
Albania	7.8	..	6.5	..	6	6-7
Bosnia and Herzegovina	4.5	..	2.3	..	2.3	4
Bulgaria	5.4	4.0	4.0	4.3	4	4.8
Croatia	2.9	4.1	3.8	4.1	4	3.5
Czech Republic	3.3	3.5	3.3	2.6	1.5-2.5	2.1-3.8
Hungary	5.2	4.2	3.8	3.0	3.2-3.5	4
Poland	4.0	1.6	1.0	0.6	1-1.2	3-3.5
Romania	1.8	4.8	5.3	4.6	4.5-5	5.2
Slovakia	2.2	2.9	3.3	3.9	3.6-3.8	4.1
Slovenia	4.6	3.0	3.0	2.7	3.3	3.7
The former Yugoslav Republic of Macedonia	4.5	-4.5	-4.1	0.2	1-2	2
Yugoslavia [c]	6.4	..	6.2	..	3	4
Baltic states	5.5	6.1	6.3	5.2	5	5¼
Estonia	7.1	5.6	5.0	5.2	4.3	5.5
Latvia	6.8	8.8	7.7	4.4	4.5-5.5	5.6
Lithuania	3.8	4.7	5.9	5.7	5.1	4.9
CIS	8.3	6.1	6.2	4.3	4½	4¼
Armenia	5.9	7.1	9.6	10.1	6	6
Azerbaijan	11.1	8.4	9.9	8.4	8.5	7.5
Belarus	5.8	3.8	4.1	4.8	6-7	7
Georgia	1.9	7.0	4.5	4.2	3.5	4
Kazakhstan	9.8	14.0	13.5	9.2	7-8	6
Kyrgyzstan	5.4	5.0	5.3	-4.9	1-2	5-6
Republic of Moldova [d]	2.1	3.1	6.1	6.4	5-6	5
Russian Federation	9.0	5.0	5.0	3.9	3.9-4.2	3.5-4.4
Tajikistan	8.3	10.3	10.2	8.3	8	6
Turkmenistan [e]	17.6	15.0	20.5	..	18	16
Ukraine	5.9	9.9	9.1	4.3	4.8-5.2	4
Uzbekistan	4.0	4.2	4.5	4.2	2-3	3
Total above	6.6	5.0	5.0	3.6	3 ¾	4
Memorandum items:						
CETE-5	3.9	2.6	2.2	1.8	2	3½
SETE-7	3.3	4.2	4.6	4.1	4¼	4¾

Source: National statistics; CIS Statistical Committee; direct communications from national statistical offices to UNECE secretariat.

Note: Aggregates are UNECE secretariat calculations, using PPPs obtained from the 1996 European Comparison Programme. Forecasts are those of national conjunctural institutes or government forecasts associated with the central budget formulation. Aggregates shown are: eastern Europe (the 12 countries below that line), with sub-aggregates CETE-5 (central European transition economies: Czech Republic, Hungary, Poland, Slovakia, Slovenia) and SETE-7 (south-east European transition economies: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Romania, The former Yugoslav Republic of Macedonia and Yugoslavia); Baltic states (Estonia, Latvia, Lithuania); and CIS (12 member countries of the Commonwealth of Independent States).

[a] As of October 2002.

[b] Over the same period of the previous year.

[c] Data exclude Kosovo and Metohia.

[d] Excluding Transdniestria.

[e] Figures for Turkmenistan should be treated with caution. In particular, the deflation procedures that are used to compute officially reported growth rates are not well documented and the reliability of these figures is questionable.

The factors that contributed to these relatively positive outcomes varied considerably across countries and subregions, often reflecting country-specific developments. In general, the shift towards domestically driven growth – which became apparent already in 2001 – strengthened in the first half of 2002, but the combination of growth enhancing factors differed from country to country. In one large group of economies (Croatia, Hungary, Russia and Slovakia, as well as most of the other CIS countries), the main impetus came from booming private consumption. The latter largely reflected improved consumer confidence resulting from several years of strong growth, enhanced by the progress in disinflation. In other countries (Bulgaria, Romania and the Baltic states), both private consumption and fixed investment made a positive contribution to growth while in some cases (Armenia and Azerbaijan), the surge in investment probably outweighed the other domestic factors of growth. The continuing expansion of FDI inflows – which in itself is an important sign of confidence in the prospects of the transition economies – also contributed to the strength of fixed investment in a number of countries. Despite the general weakening of foreign trade, net exports still made a positive contribution to growth in the first half of the year in a few countries (notably in Romania and Slovakia but also in the Czech Republic and Slovenia). However, even in cases where exports were generally subdued, exporters from a range of transition economies managed to divert some sales from traditional to new markets, not only in Europe but also in Asia and other parts of the world. In addition, faced with weakening external markets, some exporters also benefited from the robust domestic demand and managed to redirect some of their sales to the local markets.

One of the important positive messages of these recent developments is that local producers in the transition economies have demonstrated an increasing responsiveness to market opportunities, behaving more and more like genuine market agents. Moreover, since most transition economies have already liberalized their markets to a considerable extent, this expansion was achieved in an environment of growing market competition. By capitalizing on emerging market niches, local producers have not only displayed their viability in difficult and changing market conditions but have also contributed to the strength of economic activity in individual countries and in the region as a whole.

The shift away from export-led growth, however, places the transition economies in a somewhat vulnerable position. Most of these economies have chronically large current account deficits and any eventual weakening of their merchandise trade balances will pose certain risks for the sustainability of these deficits. In the first half of 2002, the negative effect of weakening exports in most cases was largely mitigated by an improvement in their terms of trade; nevertheless, in a number of transition economies there was a further deterioration of their trade and current account deficits. In addition it should be noted that the surge in domestic demand in some economies was underpinned by a notable fiscal loosening (often related to election cycles), a policy that is clearly unsustainable. In general, excessive reliance on domestically driven growth cannot be regarded as a viable medium-term strategy for the majority of the transition economies, with the possible exception of Russia which runs a massive current account surplus.

The majority of the transition economies made further progress in disinflation in the first half of 2002 (double-digit inflation rates are already more the exception than the rule), and the most advanced among them have already achieved a large degree of macroeconomic stability. However, structural factors of a long-term nature (such as the ongoing adjustment in regulated prices and the catch-up inflation typical of fast growing economies) are likely to feed inflationary pressures in these economies for a long time to come. The persistently high unemployment rates remain one of the major sources of strain in many transition economies. Due to the ongoing painful labour market adjustments, output growth in the first half of the year had a positive effect on unemployment rates in only a limited number of countries; in general, these rates increased in most countries, in some cases reaching record levels. Despite the deteriorating international environment, most transition economies were not subject to external financing constraints in this period: current account deficits were easily financed and capital inflows were on the rise. The increasing tendency for international investors to differentiate among countries has clearly been beneficial for those transition economies that have made the most progress in the process of market reforms.

(i) Output and demand

Growth is decelerating but is still high

During the first half of 2002 the dynamics of aggregate output in the transition economies remained under the influence of an unfavourable external environment, especially in western Europe. Accordingly, growth in the CIS – a region which is not so dependent on trade with western Europe – was generally faster than that in eastern Europe. Overall the average rate of GDP growth in the transition economies as a whole slowed to 3.6 per cent year-on-year during the first half of 2002,[23] down from 5 per cent in both the first half and the full year of 2001 (table 1.2.1). Continued low or waning growth in the two largest economies in the region, Poland and Russia as well as a notable deceleration of growth in Ukraine largely contributed to this outcome.[24]

While the overall downward trend prevailed, this was not the case for all individual transition economies during 2001 and the first half of 2002 (table 1.2.2). Thus, GDP growth has been accelerating, albeit slightly, in Slovakia since mid-2001, while in Hungary and Poland the downward trend was arrested in the second quarter of 2002. In general, aggregate output in the CIS region was somewhat more volatile during this period. However, in most east European and Baltic countries (except Bulgaria, Croatia, Slovakia, The former Yugoslav Republic of Macedonia and Lithuania), and in the majority of CIS economies[25] GDP growth declined between the first halves of 2001 and 2002.

As the external conditions have been deteriorating for some time, the general downward trend was not unexpected. Only a few economies have so far remained below or at the lower end of the forecasts made in early 2002, mostly due to disappointing results in key sectors, such as transport in Latvia,[26] and industry in Poland and Slovenia. Also, post-conflict recovery has proceeded more slowly than expected in The former Yugoslav Republic of Macedonia and in Yugoslavia. On the contrary, GDP growth exceeded the expectations of governments in Bulgaria, Croatia, Slovakia, Estonia and Lithuania. GDP growth in the CIS region as a whole was broadly in line with the official forecasts,[27] with Armenia and Kazakhstan performing above expectations, while Belarus, Ukraine, and especially Kyrgyzstan posted disappointing results.

As was already the case last year, weak external demand has in a number of economies been partly offset by domestic demand, specifically by consumption, as a source of growth (table 1.2.3). The factors behind this development vary across the region and include increases in consumer confidence and expectations after several years of rising real incomes, continuing disinflation (often more than expected) giving a further boost to real incomes, and election cycles often accompanied by significant increases in public expenditures, especially in some central European and Baltic countries. The retail trade pattern across the region also confirms the strong support of private consumption (table 1.2.4): the volume of retail sales in the region as a whole increased by 8 per cent

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[23] All growth rates referring to the first half of 2002 presented in this section are year-on-year rates. It should be noted that the absence of seasonally adjusted quarterly national accounts statistics prevents a more accurate assessment of the short-term dynamics of aggregate output in the transition economies.

[24] The slowdown in these three economies together subtracted 1 percentage point from the average growth rate for the transition economies as a whole compared with the same period of 2001.

[25] The exceptions are Armenia, Azerbaijan, Belarus, the Republic of Moldova and Uzbekistan.

[26] Transit shipment of crude oil via Latvian ports decreased by 25 per cent during the first half of 2002. BOFIT, *Baltic Economies – Bimonthly Review*, 5/2002 (Helsinki), 12 September 2002.

[27] UNECE, *Economic Survey of Europe, 2002 No. 1*, p. 11, table 1.3.1.

TABLE 1.2.2

GDP and industrial output in eastern Europe, the Baltic states and the CIS, 2001-2002

(Percentage change over the same period of the preceding year)

	GDP						*Industrial output*							
	2001				*2002*		*2001*				*2002*		*2001*	*2002*
	QI	*QII*	*QIII*	*QIV*	*QI*	*QII*	*QI*	*QII*	*QIII*	*QIV*	*QI*	*QII*	*HI*	*HI*
Eastern Europe	3.2	2.8	2.8	2.4	2.1	2.7	6.9	3.3	1.2	2.1	0.5	2.0	5.1	1.3
Albania	..	..	..	..	..	..	..	..	..	..	..	..	-20*	4*
Bosnia and Herzegovina	..	..	..	..	..	..	14.5	12.6	13.9	6.7	..	..	14.6	..
Bulgaria	4.0	4.1	3.9	4.2	3.2	5.3	5.6	-2.1	3.2	-3.8	-2.1	7.7	1.7	1.5
Croatia	3.4	4.8	4.1	2.8	4.3	4.0	5.6	6.2	6.0	6.1	1.9	2.5	5.9	2.2
Czech Republic	3.6	3.5	3.3	2.7	2.8	2.5	10.0	7.2	4.2	5.8	4.1	4.9	8.6	4.5
Hungary	4.4	4.0	3.7	3.3	2.9	3.1	10.3	5.6	-1.6	0.6	0.6	1.7	8.0	1.1
Poland	2.3	0.9	0.8	0.2	0.5	0.8	4.5	-0.7	-0.8	-2.6	-1.6	-0.4	1.9	-1.1
Romania	4.3	5.1	5.7	5.3	3.1	5.7	10.8	10.0	4.2	7.8	3.2	4.0	10.4	3.6
Slovakia	3.0	2.8	3.5	3.9	3.9	4.0	7.8	7.9	7.3	4.9	1.1	5.4	7.9	3.3
Slovenia	3.2	2.8	3.3	2.6	2.2	3.2	4.7	1.8	2.7	2.6	1.7	2.5	3.2	2.1
The former Yugoslav Republic of Macedonia	-5.7	-3.4	-6.0	-1.2	–	0.3	-8.7	-8.9	-14.1	-8.8	-14.4	-8.0	-8.8	-11.2
Yugoslavia	..	..	..	..	..	..	-0.5	-4.1	-6.0	10.1	-4.4	-0.1	-2.4	-1.4
Baltic states	5.5	6.7	5.1	7.7	3.9	6.3	9.9	13.3	9.3	16.8	0.4	7.2	11.5	3.8
Estonia	5.7	5.5	3.9	5.1	3.2	7.0	8.1	5.8	7.7	9.5	-1.5	6.8	6.9	2.7
Latvia	8.3	9.3	6.4	6.8	3.8	4.9	6.5	9.5	8.9	5.6	0.1	5.7	7.9	2.7
Lithuania	3.6	5.7	4.8	9.6	4.4	6.9	12.4	19.0	10.3	25.8	1.7	8.1	15.6	4.9
CIS	5.4	7.0	6.7	5.6	4.2	4.5	6.7	8.1	6.3	5.5	3.1	3.6	7.6	3.9
Armenia	12.3	2.2	16.5	7.8	7.4	12.9	9.2	-3.1	5.9	3.8	13.9	10.3	2.7	12.1
Azerbaijan	8.1	8.7	11.1	11.7	4.7	12.1	6.1	4.1	6.0	4.2	0.1	2.9	5.1	1.5
Belarus	2.4	5.1	4.5	4.0	3.9	5.6	2.7	6.5	6.0	8.4	2.0	4.7	4.6	4.0
Georgia	3.6	10.3	1.4	3.1	6.9	1.8	-10.6	5.2	4.4	-2.3	1.2	-0.9	-3.1	0.1
Kazakhstan	11.4	17.1	12.9	12.7	10.4	8.2	11.2	15.9	13.7	12.8	12.2	6.1	13.6	8.7
Kyrgyzstan	5.2	4.8	10.2	1.2	-2.8	-7.0	14.2	-0.1	5.8	-0.8	-10.7	-14.3	6.0	-13.6
Republic of Moldova	2.6	3.6	5.1	13.1	4.8	8.0	3.1	22.2	12.4	20.2	8.8	13.1	12.1	11.0
Russian Federation	4.8	5.3	5.8	4.3	3.7	4.1	5.2	5.9	4.5	4.1	2.7	3.8	5.5	3.2
Tajikistan	7.6	13.0	15.7	4.9	9.3	7.3	13.9	12.1	22.1	11.4	5.4	10.4	13.0	7.9
Turkmenistan	10.0	20.0	24.3	27.7	10.8	..	4.5	12.7	10.9	16.0	16.0	23.9	8.5	20.0
Ukraine	7.8	12.0	8.1	8.5	3.8	4.8	15.1	18.4	12.5	7.6	1.6	1.9	18.5	5.8
Uzbekistan	2.8	5.6	5.1	4.5	3.1	5.3	7.0	8.0	7.8	9.6	6.7	-0.4	7.5	3.1
Total above	4.6	5.4	5.2	4.5	3.4	3.9	6.9	6.2	4.2	4.2	1.9	3.0	6.6	2.8
Memorandum items:														
CETE-5	3.0	2.2	2.1	1.6	1.7	1.9	7.1	3.1	1.0	1.3	0.5	1.6	5.0	1.1
SETE-7	3.7	4.4	4.6	4.5	3.0	4.9	6.5	4.3	1.8	5.0	0.5	3.4	5.4	2.0
Former GDR	..	..	..	..	..	..	7.8	4.3	3.9	0.5	-0.2	2.6	6.0	1.2

Source: National statistics; CIS Statistical Committee; direct communications from national statistical offices; UNECE secretariat estimates.

Note: On regional aggregates and other information see the note to table 1.2.1.

during the first six months of 2002.[28] In contrast, preliminary data suggest that investment did not follow a uniform pattern across countries. Investment remained strong in the region, but slowed down in most of eastern Europe and in the CIS,[29] and considerably so in Russia, but not in the Baltic countries.

The connection between the external environment and economic activity is particularly strong for industrial output. Compared with the first half of 2001, industrial output weakened in most transition economies: growth was negative in Poland, The former Yugoslav Republic of Macedonia, Yugoslavia and Kyrgyzstan, and there was a pronounced slowdown in Hungary, Romania, the Baltic states, Kazakhstan and Ukraine. Exceptions are to be found only in some of the smaller economies such as Armenia, and Georgia, where output is generally more volatile.

The sensitivity to the deteriorating external environment varied substantially across industries in the first half of 2002. In eastern Europe, output in the chemical, textiles and basic metals industries was generally falling (year-on-year), while the engineering industry faired better than the average.[30] Thus, the overall slowdown in industrial output was less

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[28] Compared with 6.5 per cent in the first half of 2001. UNECE secretariat calculations, based on PPP-adjusted, GDP-weighted data from the UNECE Common Database.

[29] This is consistent with the observation that producer price inflation and unit labor cost developments imply declining unit operating profits in many countries of the region (sect. 1.2(ii)).

[30] Romania is an exception, as output strengthened mainly in food processing and metal processing and to a lesser extent in textiles and the chemical industry.

TABLE 1.2.3

Major demand components of GDP in selected eastern European, Baltic and CIS economies, 2001-2002
(Percentage change over the same period of the preceding year)

	Private consumption expenditure [a]			*Government consumption expenditure* [b]			*Gross fixed capital formation*			*Total domestic expenditure* [c]			*Net exports* [d]		
	2001		*2002*	*2001*		*2002*	*2001*		*2002*	*2001*		*2002*	*2001*		*2002*
	HI	*H2*	*HI*	*HI*	*H2*	*HI*	*HI*	*H2*	*HI*	*HI*	*H2*	*HI*	*HI*	*H2*	*HI*
Bulgaria	4.6	5.5	2.7	3.7	1.3	1.6	16.2	22.7	8.1	4.5	8.9	5.5	-0.9	-5.1	-1.6
Croatia	6.1	3.1	6.0	-3.9	-4.6	-2.3	9.4	10.0	9.0	9.6	-0.9	4.7	-6.5	4.4	-1.3
Czech Republic	3.6	4.2	3.9	-1.2	1.6	4.7	7.6	7.0	3.5	5.2	4.7	2.1	-1.9	-2.1	0.4
Hungary	4.7	5.1	8.9	0.4	-0.1	3.8	3.1	3.1	6.5	3.7	0.7	3.5	0.5	2.8	-0.5
Poland	1.6	2.9	3.2	-0.2	0.2	1.7	-4.4	-13.1	-10.6	-1.6	-2.3	0.5	3.3	2.9	0.1
Romania	7.4	6.4	3.5	2.2	0.4	0.7	6.4	6.2	5.7	8.9	7.8	2.4	-4.6	-2.8	2.0
Slovakia	2.7	5.1	5.5	3.3	6.5	6.8	9.9	9.3	-0.3	6.4	8.5	3.4	-3.2	-4.7	0.9
Slovenia	1.6	1.8	1.9	3.2	3.2	3.3	-3.7	-0.2	2.9	-0.5	1.5	2.3	3.5	1.4	0.4
Estonia	3.6	6.1	7.1	1.2	3.1	4.5	6.0	11.8	16.6	4.5	4.7	11.3	-1.9	-2.6	-4.1
Latvia	7.8	6.5	6.5	-5.4	-3.4	5.5	12.2	20.2	9.2	9.3	11.5	6.3	-0.9	-6.3	-2.2
Lithuania	3.1	1.0	6.0	-0.4	1.2	0.3	2.5	13.3	21.1	5.8	8.2	9.9	-2.3	-2.9	-6.3
Russian Federation	9.7	7.7	5.5	-1.1	-0.9	2.2	10.7	12.3	2.5	7.8	9.6	4.2	-1.1	-2.4	0.3

Source: National statistics; CIS Statistical Committee data; direct communications from national statistical offices to UNECE secretariat.

[a] Expenditures incurred by households and non-profit institutions serving households.

[b] Expenditures incurred by the general government on both individual consumption of goods and services and collective consumption of services.

[c] Total consumption expenditure plus gross capital formation.

[d] Percentage point contribution to GDP growth over the same period of the preceding year.

pronounced in the Czech Republic and Slovakia, which are specialized in automobile production and other transport equipment. The general pattern was less clearly followed in the Baltic countries,[31] except in Lithuania, while industrial performance in the CIS was more differentiated: the engineering branches were generally on the decline, textiles output declined in the Republic of Moldova and Ukraine, but grew faster than the average in Azerbaijan and Kazakhstan.

(a) Eastern Europe and the Baltic states

Economic activity is bolstered by domestic demand

Overall, the impact of the global slowdown on growth in eastern Europe and the Baltic region has been less pronounced than it was initially feared. Predictably, given the comparatively strong trade links, the adverse impact has been strongest on *central Europe*, where GDP growth dropped to 1.8 per cent in the first half of 2002, making it the slowest growing subregion among the transition economies. However, this was largely due to the weak performance of the Polish economy, which is undergoing a period of structural adjustment and has been in a state of near stagnation since the second quarter of 2001.[32] Central Europe without Poland (that is, the Czech Republic, Hungary, Slovakia and Slovenia) grew by some 3 per cent in the first half of 2002. On the back of strong consumption and investment demand, the *Baltic states* averaged 5.2 per cent GDP growth in the same period, a notable achievement for a group of very small, open economies in the face of a global downturn. In *south-east Europe*, a strong recovery continued in Albania, but growth was much weaker in Bosnia and Herzegovina and Yugoslavia, while the economy of The former Republic of Macedonia stagnated. Combined with strong growth supported by buoyant domestic demand in Bulgaria, Croatia and Romania, the rate of growth of aggregate GDP in this subregion reached 4.1 per cent in the first half of 2002 (table 1.2.1).

According to quarterly figures for the first quarter of 2002, industrial production in many east European and Baltic countries had almost come to a standstill or even declined compared with the same quarter in 2001. Second quarter data suggest a selective upturn in industrial output, notably in Bulgaria, Slovakia and the Baltic states (table 1.2.2). However, it remains to be seen whether this will be sustained in the rest of the year.

As indicated by the available national accounts data,[33] the prime source of growth in the region has been domestic demand and in some countries (particularly Estonia and Lithuania) net trade made a sizeable negative contribution to GDP. The main exceptions were Romania, due to its surprisingly good export performance (section 1.2(iv)), and Slovakia, mostly due to the reduced imports

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[31] Estonian industry received strong support from textiles, while the chemical industry made a substantial contribution to Latvian industrial output growth.

[32] For more details see UNECE, *Economic Survey of Europe, 2002 No. 1*, pp. 63-69.

[33] At the time of writing, quarterly national accounts data for the first half of 2002 were only available for a limited group of countries shown in table 1.2.3.

TABLE 1.2.4

Volume of retail trade in eastern Europe, the Baltic states and the CIS, 2001-2002

(Percentage change over the same period of previous year)

	2001			*2002*		
	HI	*HII*	*2001*	*QI*	*QII*	*HI*
Eastern Europe						
Albania	-9.2	..	..	-11.1	-6.1	-8.5
Bosnia and Herzegovina	27.6	..	..	..	..	..
Bulgaria	3.3	5.3	4.3	2.2	0.6	1.4
Croatia	11.6	8.2	10.0	13.0	10.2	11.5
Czech Republic	4.0	4.9	4.3	4.2	2.6	3.3
Hungary	5.6	4.3	5.4	13.2	10.1	11.5
Poland	-1.8	1.6	0.7	6.3	1.3	3.7
Romania	-2.5	4.5	1.3	-0.8	2.6	1.0
Slovakia	0.7	8.0	4.5	5.8	8.9	7.4
Slovenia	6.2	8.2	7.8	8.8	7.9	8.9
The former Yugoslav Republic of Macedonia	-6.8	-14.2	-10.7	-1.9	7.8	3.0
Yugoslavia	5.0	28.2	16.0	31.6	16.6	23.0
Baltic states						
Estonia	10.1	9.4	13.0	13.2	14.5	13.9
Latvia	13.7	5.7	9.5	12.2	14.7	13.5
Lithuania	7.1	8.8	9.8	12.8	16.2	14.6
CIS						
Armenia	14.0	16.9	15.5	8.8	19.6	14.2
Azerbaijan	9.3	10.5	9.9	9.2	8.6	8.9
Belarus	16.8	25.4	21.2	15.7	14.9	15.3
Georgia	3.3	7.9	8.9	2.2	-0.2	1.0
Kazakhstan	13.3	15.1	14.2	10.4	7.5	8.9
Kyrgyzstan	6.3	5.5	6.1	5.4	7.0	6.2
Republic of Moldova	10.8	25.6	14.8	11.2	32.4	21.4
Russian Federation	9.6	11.4	10.7	9.1	7.7	8.5
Tajikistan	-5.7	8.4	1.2	21.8	16.7	19.2
Turkmenistan	..	..	32.0	..	..	..
Ukraine	8.8	14.3	11.6	15.5	18.1	16.8
Uzbekistan	..	..	9.5	8.7	2.8	5.7

Source: National statistics; CIS Statistical Committee; direct communications from national statistical offices to UNECE secretariat.

Note: Retail trade covers mainly goods in eastern Europe, the Baltic states, Kazakhstan and the Russian Federation; it comprises goods and catering in other CIS countries. There are regular and considerable revisions of the data for the most recent months in The former Yugoslav Republic of Macedonia. The coverage in 2001-2002, based on current reporting, may differ from the coverage in annual statistics. The quarterly and half-year figures in the table are based on reported monthly data. For all east European countries (except Bulgaria), the Baltic states and the Russian Federation, they were computed from fixed-based monthly indices. The figures for Bulgaria and the CIS countries (except the Russian Federation) were computed using a decumulation technique (see note to table 1.2.2).

of goods and services.[34] Domestic demand in eastern Europe and the Baltic states was underpinned by strong total final consumption which, in most countries, contributed some 2 to 3 percentage points to GDP growth in this period. The largest contributions of total consumption to GDP growth (above 4 percentage points) were in Slovakia, the three Baltic countries, and especially in Hungary.

For the first six months of the year, there were double-digit rates of increase in the volume of retail trade sales in Croatia (supported by booming tourism), Hungary (fed, *inter alia*, by very large real wage increases originating in the public sector), Yugoslavia, and the three Baltic countries. In a regional perspective, the volume of retail sales increased by 4 per cent in the south-east European transition economies, but by more than 14 per cent in the Baltic states. There was a notable acceleration of sales in the central European transition economies, where their aggregate volume increased by about 5.5 per cent, after growing by barely 1 per cent in 2001.[35] The Polish consumer market seems to be recovering, perhaps sending the very first signal of recovery after stagnating during the whole of 2001.

In addition to strong private consumption, fiscal policies appear to have provided a further stimulus to domestic demand in a number of countries. In Hungary, government consumption rose by 3.8 per cent during the first half of 2002, contributing some 0.8 percentage points to GDP growth. Data for the Czech Republic, Slovenia and Estonia imply similar contributions, while in Slovakia government consumption accounted for 1.2 percentage points of real GDP growth.[36] Too heavy a reliance on fiscal stimuli, however, may endanger the internal and external equilibrium of these generally small, open economies before an export-led recovery is able to set in again.

Except for Slovakia, where gross fixed capital formation shrank slightly, and Poland, where it fell by 10.6 per cent during the first half of 2002, reflecting uncertainties about the country's future performance, fixed investment continued to grow rapidly in most east European and Baltic countries. Investment was strong in Bulgaria, Croatia, Hungary, Latvia and, especially, in Estonia and Lithuania where FDI inflows underpinned double-digit rates of growth of fixed investment. The available national accounts data indicate, however, that investment generally subsided somewhat in early 2002. In most cases gross fixed capital formation contributed around 1 percentage point to real GDP growth, while in Croatia, Estonia and Lithuania the corresponding figures were 2.1, 3.9 and 5.2 percentage points, respectively.

(b) The Commonwealth of Independent States

The Russian growth engine loses some steam

Overall, growth in the CIS economies in the first half of 2002 was significantly weaker than a year ago; nevertheless, the average GDP growth rate was still 4.3 per cent. This deceleration largely reflects developments in Russia and Ukraine which together, account for about

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[34] There was also a small positive net trade contribution to GDP growth in the Czech Republic and Slovenia. The Slovenian net trade position profited from both industrial exports and receipts from transport services. Czech exports of industrial goods withstood a large real currency appreciation, but the consequences of the August floods, however, may have negatively affected Czech industrial output in the second half of the year.

[35] UNECE secretariat calculations, based on PPP-adjusted, GDP-weighted data from the UNECE Common Database.

[36] Slovak government consumption has increased for seven consecutive quarters, in part reflecting the ongoing reform of state administration, which adds a new regional layer of government.

80 per cent of the CIS aggregate GDP. In the first half of 2002, GDP growth in most countries was between 3 and 5 per cent (table 1.2.1). Intercountry variations were mainly due to specific conditions related to key commodities in some of the Caucasian rim and central Asian economies. With oil and gas but little diversification, Azerbaijan and Kazakhstan managed to remain in the high growth group with GDP increasing by 8.4 and 9.2 per cent, respectively. The fast growing CIS countries include two of the lower income economies – Armenia and Tajikistan – with GDP growth of 10.1 and 8.3 per cent, respectively, the former benefiting from large increases in exports of jewellery and precious stones, and the latter from a larger output of processed cotton. At the lower end of the range, Kygryzstan's GDP fell by 4.9 per cent during the first six months of 2002.[37]

The slowing pace of the Russian economy has been central for recent CIS performance. While Russia still posted a comparatively strong GDP growth of 3.9 per cent in the first half of 2002, the main sources of growth following the 1998 crisis (such as high real export revenues followed by an investment boom) appear to have been gradually exhausted. Personal consumption has now taken over as the main driving force of growth in Russia, as is evidenced by the slowing rate of investment, coupled with the strong growth of retail trade, and by the fact that in the second quarter of 2002 the output of services grew faster than the production of goods.[38]

Total industrial output in the CIS grew by 3.9 per cent in the first half of 2002, about half its rate in the corresponding period of 2001, the slowdown being quite notable in the three largest economies, Kazakhstan, Russia and Ukraine. Kazakhstan, however, managed to maintain high growth rates of output in both the extractive and manufacturing industries. The deceleration of output was especially pronounced in Ukraine, due to the weakening of output in metallurgy and metalworking, especially steel. Much of this, however, reflects a high base level in the first months of 2001, when the expected imposition of value added tax on Ukrainian products sold to Russia scheduled for mid-2001 had led industrial producers and exporters to accelerate a proportion of planned deliveries. The growth of Russia's industrial output slowed down to 3.2 per cent in the first half of 2002, one of the lowest in the CIS; however, there have been signs of some acceleration after the first quarter and, especially, in July and August.

In consequence of a worsening intra-CIS trade performance and, specifically, the sharp drop in Russia's imports from the CIS (section 1.2(iv)), the region has switched from external to domestic sources of growth, as in eastern Europe and the Baltic states. The changes in the main components of domestic demand, however, were quite uneven. Personal consumption, as measured by the volume of retail trade, continued to increase at high rates in most of the CIS, reaching an average growth rate of 9.2 per cent in the first half of the year, only slightly lower than a year ago.[39] With the exception of Georgia, Kyrgyzstan and Uzbekistan, in all the CIS countries the volume growth of retail sales was close to or above 10 per cent in the first half of 2002.

According to the monthly statistics on investment outlays, fixed investment in the CIS as a whole increased by about 6 per cent in the first half of 2002, down from 9 per cent a year ago, and 10 per cent for all of 2001.[40] In Russia it increased by only 2 per cent over the first six months of 2002, partly reflecting a slump during the first quarter that was mainly due to cuts in government financed investment in transport infrastructure.[41] Investment outlays in the first half of the year grew strongly in Armenia (25 per cent), Kazakhstan (9 per cent) and the Republic of Moldova (12 per cent). In Azerbaijan, the volume of investment even doubled during the same period, mainly due to the start of work on three major energy sector investments.

(ii) Costs and prices

Disinflation continues

The downward trend in consumer price inflation, which generally resumed in eastern Europe, the Baltic states and the CIS in early 2001, continued in the first half of 2002. Lower food and domestic fuel prices were the main factors behind this performance, particularly in the second quarter when disinflation gained momentum. Thus, as in 2001, the lower inflation in the first half of 2002 was not the result of more moderate domestic cost-push and/or demand-pull factors but in general the reflection of good harvests and the real appreciation (in some cases significant) of exchange rates which alleviated external supply-side cost pressures. Furthermore, due to transmission lags, the effect of rising world commodity prices (which have been recovering from the lows of the last quarter of 2001), particularly of crude oil, had not yet worked through into domestic prices.[42] In fact, in many

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[37] This decline was expected to be temporary, due to low construction activity and a fall in agricultural output caused by bad weather. IMF, *Kyrgyz Republic. First Review Under the Three Year Arrangement Under the Poverty Reduction and Growth Facility,* (Washington, D.C.), 17 June 2002, p. 10. However, the situation cannot be expected to improve significantly for the remainder of the year, as mining and processing at the Kumtor gold field came to a standstill in early July after an accident.

[38] This pattern, however, may have already been reversed in the third quarter: in August the fastest growing industries were the export-oriented ones such as fuels, chemicals and non-ferrous metals, all of which grew by about 7 per cent. BOFIT, *Russian and Baltic Economies – The Week in Review,* 38/2000 (Helsinki), 20 September 2002.

[39] CIS Statistical Office, "Economies of the countries of the Commonwealth of Independent States in 1st half-year of 2002", *Press Release* (Moscow), 1 August 2002.

[40] Ibid.

[41] Russian European Centre for Economic Policy, *Russian Economic Trends,* Vol. 11, Issue 3 (Moscow), September 2002, p. 64. However, Russian investment in this period was more diversified than in previous years when it was dominated by the energy sector.

[42] World energy prices in dollars rose by 29.6 per cent between December 2001 and June 2002. Over the same period the "total HWWA index excluding energy" and the "industrial raw materials" index had risen by 6.7 and 8.1 per cent, respectively.

TABLE 1.2.5

Consumer prices, industrial producer prices and labour costs in industry [a] in eastern Europe, the Baltic states and the CIS, 2001-2002

(January-June over the same period of previous year, percentage change)

	Consumer price index		*Producer price index*		*Nominal gross wages [b]*		*Real product wages [c]*		*Labour productivity [d]*		*Unit labour costs [e]*	
	2001	*2002*	*2001*	*2002*	*2001*	*2002*	*2001*	*2002*	*2001*	*2002*	*2001*	*2002*
Albania	2.7	6.1	..	..	..	..	..	..	..	..	..	..
Bosnia and Herzegovina	2.7	..	1.3	..	7.4	..	6.0	..	20.2	..	-10.6	..
Bulgaria [f]	9.2	7.6	8.3	0.4	7.2	2.6	-1.1	2.2	5.8	-3.4	1.3	6.3
Croatia [g]	6.5	2.6	6.0	-2.0	9.0	5.7	2.8	7.8	7.3	3.7	1.5	1.9
Czech Republic	4.6	3.1	4.2	-0.2	6.9	4.9	2.6	5.1	7.6	3.9	-0.6	1.0
Hungary	10.5	6.0	9.3	-1.4	15.6	13.1	5.8	14.7	6.4	0.2	8.7	12.9
Poland	6.7	2.8	3.3	0.5	7.2	4.4	3.7	3.9	6.9	6.0	0.2	-1.5
Romania	38.4	25.5	48.7	26.2	54.1	29.0	3.7	2.3	13.6	2.4	35.7	25.9
Slovakia	7.0	3.9	8.0	1.9	10.3	8.0	2.2	5.9	6.7	3.5	3.4	4.3
Slovenia	9.2	7.9	10.1	5.9	12.4	9.3	2.0	3.2	2.1	1.1	10.1	8.1
The former Yugoslav Republic of Macedonia	5.3	2.7	5.1	-0.7	4.6	4.8	-0.5	5.6	-2.3	..	7.0	..
Yugoslavia	121.9	26.4	118.1	14.3	128.1	79.2	4.6	56.8	1.2	5.9	125.4	69.2
Estonia	6.4	4.3	5.8	0.7	13.9	11.0	7.6	10.2	1.7	6.9	11.9	3.8
Latvia	1.8	2.5	1.1	1.3	-1.8	14.0	-2.9	12.5	8.2	3.3	-9.3	10.4
Lithuania	0.8	1.6	1.0	-2.3	-1.7	4.5	-2.6	7.0	21.0	3.2	-18.7	1.2
Armenia	3.3	1.7	-0.2	2.6	12.5	11.3	12.7	8.5	8.8	10.5	3.3	0.7
Azerbaijan	1.7	2.3	-3.1	-2.2	24.4	21.5	28.5	24.3	7.9	3.2	15.3	17.8
Belarus	76.4	45.9	111.2	37.7	119.5	69.4	3.9	23.0	5.3	5.5	108.5	60.5
Georgia	5.9	6.0	3.2	..	..	..	..	..	..	..	..	..
Kazakhstan	9.4	5.6	6.7	-6.4	25.4	19.6	17.6	27.9	..	7.3	..	11.5
Kyrgyzstan	8.8	1.6	14.6	5.2	24.5	11.6	8.6	6.1	10.1	-14.5	13.0	30.5
Republic of Moldova	14.4	6.1	17.8	7.5	28.5	29.3	9.1	20.2	11.4	4.8	15.4	23.3
Russian Federation [h]	23.4	16.8	24.6	7.7	45.3	37.8	16.6	27.9	3.3	1.2	40.7	36.2
Tajikistan	57.5	10.6	37.6	4.5	42.8	41.2	3.8	35.1	12.1	6.2	27.5	33.0
Turkmenistan	..	..	..	..	..	..	..	..	..	..	..	..
Ukraine	16.9	2.2	12.8	0.9	38.9	22.8	23.2	21.6	21.6	3.8	14.2	18.3
Uzbekistan	26.9	..	50.6	..	54.6	..	2.6	..	..	..	..	..

Source: UNECE secretariat estimates, based on national statistics and direct communications from national statistical offices.

[a] Industry = mining + manufacturing + utilities.

[b] Average gross wages in industry except in Bosnia and Herzegovina – net wages in industry; in Bulgaria, Estonia, Lithuania (since 1999) and all CIS economies – gross wages in total economy; in The former Yugoslav Republic of Macedonia and Yugoslavia – net wages in total economy.

[c] Nominal gross wages deflated by producer price index.

[d] Gross industrial output deflated by industrial employment.

[e] Nominal wages deflated by productivity.

[f] First quarter data for producer prices in 2002.

[g] Retail price index for consumer prices.

[h] The data for employment in industry used to calculate labour productivity are secretariat estimates.

of the east European economies for which such data are available, the rates of core inflation (CPI excluding food and energy) remained rather stable in the first half of 2002 reflecting continued relatively strong growth in service prices. The core rate fell only in Poland, largely due to the lagged effects of a long period of tight monetary policy and a strong zloty.

Among all these economies, in the first half of 2002, the CPI accelerated over the same period of 2001 only in Albania, Latvia, Lithuania and Azerbaijan, but in the latter two rates remained low (table 1.2.5). In Slovenia, inflation fell only slightly and remained relatively high (at nearly 8 per cent) compared with most other transition economies: this was mainly due to a further strengthening consumer demand and continuing labour cost pressure. Also in Hungary both demand-pull and labour cost-push factors put strong pressure on prices. However, the nominal effective exchange rate of the Hungarian forint appreciated sharply in real terms, alleviating to a large extent the external cost pressures. In Bulgaria, the year-on-year inflation rate in the first half of 2002 reached 7.6 per cent, but this was driven mainly by sharply increased domestic energy prices and one-off increases in excise duties and administrative fees in the first quarter. In the first half of 2002, inflation rates remained in double digits only in Romania, Yugoslavia, Belarus, Russia and Tajikistan. However, there was a significant slowdown in price increases in these countries as well, particularly in the second quarter, mainly thanks to food price disinflation, which was accompanied by relative wage discipline in Romania and the appreciation of the rouble in Russia.

On the side of domestic costs, wage inflation remained strong and rose much faster than labour productivity in industry, particularly in those countries where the slowdown in industrial output was accentuated by declining foreign demand. Consequently, with few exceptions (mainly Croatia, the Czech Republic, Poland, Lithuania and Armenia), unit labour costs continued to rise rapidly in the first half of 2002. In Romania, Yugoslavia, Belarus and Russia, the rate of increase in unit labour costs declined from 2001 but still remained quite high. The growth of unit labour costs accelerated in Bulgaria, Hungary, Latvia and most of the CIS. In contrast, there was a significant fall in industrial producer price inflation in most of the east European and Baltic economies. This suggests that much of the rising labour cost pressure has been absorbed by unit operating profits. Producer price inflation also decelerated in the CIS economies in the first half of 2002, however, the rate remained relatively high. Nevertheless, the rise in industrial unit labour costs in these countries was significantly greater than the increase in producer prices (with the main exception of Armenia), which suggests a severe squeeze on unit operating profits in industry and probably reflects growing competition on the domestic markets.

On the demand side, the strong growth in private consumption, boosted by rising real household incomes since mid-2001, so far does not appear to have been inflationary. Monetary policy in a number of economies (Poland being the main exception) remained expansive or started to ease; despite that, nominal exchange rates in most cases rose more slowly than inflation, and in some countries even appreciated, partly due to a surge in capital inflows (see below). This has further abated the effect of imported inflation on the dynamics of domestic prices. Only in a few economies such as Bulgaria (fiscal retrenchment) and Poland (tight monetary policy), is it possible to trace a direct link between the tight stance of domestic macroeconomic policies and lower inflation; in the other countries the favourable inflation performance in the first half of 2002 was largely due to a favourable external environment and profits adjustment in the enterprise sector.

In the short term, unless an external shock, such as a surge in world energy prices caused by a war in the Middle East, leads to large increases in material input costs, a further slowdown in inflation rates can be expected.[43] As the inflationary expectations of household have moderated in many of the transition economies in recent quarters and rising job insecurity has started to erode sentiment among consumers, the major domestic pressure on industrial producer prices in the second half of 2002 is likely to come from unit labour costs if there is a further slowdown in export-led industrial output and productivity. However, the recent deterioration in the labour markets and growing fears of rising unemployment may check wage demands in many of these economies. Consequently, the inflation forecasts or targets incorporated in the budgets for 2002 as a whole and probably for 2003 can be expected to be achieved or in some cases actual rates may even turn out to be lower.

(iii) Labour markets

Unemployment in the region stays high

In the first half of 2002, the labour markets in the majority of transition economies, particularly in eastern Europe, remained rather tense with a number of countries facing problems with persistently high levels of unemployment. In eastern Europe unemployment has been worsening, since 1999, when it started rising in the aftermath of the Russian financial crisis and then continued as a result of intensified enterprise restructuring in most countries. Consequently, between June 1998 and June 2002, the average regional unemployment rate increased by more than four percentage points to nearly 16 per cent, the highest mid-year rate since the start of transition (table 1.2.6). In the Baltic states, the situation also deteriorated considerably over this period and despite some improvement in the first half of 2002, the unemployment rate averaged 9 per cent in June, more than 3 percentage points higher than four years earlier. The statistics on registered unemployment in the CIS countries do not present a reliable picture of the situation in their labour markets; nevertheless, the available data from labour force surveys indicate a further fall in the rate of joblessness in Kazakhstan, Russia and Ukraine where the strong recovery in recent years has finally led to the creation of new jobs.[44]

The negative social consequences of the high rates of unemployment are exacerbated in many transition economies by specific problems such as the disproportionately large rise in youth unemployment,[45] the increasing duration of unemployment (with the share of the long-term unemployed in some countries reaching 50 per cent or more of total unemployment), and the continuing fall in the number of people eligible for unemployment benefits.[46] The situation, however, still differs considerably among countries and subregions.

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[43] There has already been, however, a sharp rise in crude oil prices in September (see sect. 1.1).

[44] The three largest economies in the CIS account for nearly 80 per cent of the region's labour force and conduct regular quarterly labour force surveys.

[45] For a more detailed discussion see UNECE, *Economic Survey of Europe, 2002 No. 1*, pp. 118-120.

[46] The current situation with unemployment in many east European countries is considerably worse than it was in 1993 when unemployment in the region peaked for the first time. Unemployment benefit systems were originally set rather generously, but in most countries they have been substantially tightened in the course of transition. The regulations determining access to such benefits have become considerably more restrictive, both in terms of eligibility and in terms of the amount and duration of benefits. Thus, in June 2002, in countries such as Bulgaria, Croatia, Poland and Slovakia where unemployment rates were above 17 per cent, some two thirds or more of the unemployed were no longer eligible for unemployment benefit.

TABLE 1.2.6

Registered unemployment in eastern Europe, the Baltic states and the CIS, 2001-2002 [a]

(Per cent of labour force, end-of-period)

	2001			2002	
	Jun.	*Sept.*	*Dec.*	*Mar.*	*Jun.*
Eastern Europe	14.9*	14.9*	15.6*	16.9*	15.7*
Albania	15.1	14.8	14.5	14.3	14.2
Bosnia and Herzegovina [b]	39.3	39.9	39.9	40.4	41.5[c]
Bulgaria	17.1	16.5	17.3	17.5	17.2
Croatia	21.5	22.0	23.1	23.8	22.2
Czech Republic	8.1	8.5	8.9	9.1	8.7
Hungary [d]	8.8	8.4	8.4	9.1	8.1
Poland	15.9	16.3	17.4	18.1	17.3
Romania	8.7	7.8	8.6	13.2	9.6
Slovakia	17.8	17.4	18.6	19.1	17.6
Slovenia	11.1	11.3	11.8	11.7	11.3
The former Yugoslav Republic of Macedonia	41.0*	41.0*	42.0*	43.0*	43.0*
Yugoslavia [e]	27.1	27.8	27.9	28.7	29.0
Baltic states	9.8	9.8	10.2	10.4	9.1
Estonia [f]	8.0	7.8	7.7	8.3	7.0
Latvia	7.8	7.6	7.7	8.2	7.9
Lithuania	12.1	12.0	12.9	12.6	10.7
CIS [g]	9.1	9.1	9.4	8.9	8.2
Armenia	10.4	10.0	9.8	9.7	9.5
Azerbaijan	1.3	1.3	1.3	1.3	1.3
Belarus	2.2	2.3	2.3	2.6	2.6
Georgia	..	..	..	..	..
Kazakhstan [h]	9.5	9.1	11.1	10.7	8.8
Kyrgyzstan	3.2	3.2	3.1	3.2	3.3
Republic of Moldova	2.0	1.8	1.7	2.2	1.9
Russian Federation [h]	8.6	8.7	8.7	8.2	7.7
Tajikistan	2.5	2.5	2.6	2.6	2.7
Turkmenistan	..	..	..	..	..
Ukraine [h]	10.6	10.3	11.2	10.6	9.7
Uzbekistan	..	..	..	..	..
Memorandum items:					
CETE-5	13.7	13.9	14.7	15.3	14.5
SETE-7	16.4*	16.3*	16.9*	19.2*	17.4*
Russian Federation [i]	1.4	1.4	1.6	1.8	1.7
Former GDR	16.8	16.9	17.6	18.8	17.8

Source: National statistics; direct communications from national statistical offices to UNECE secretariat; Economist Intelligence Unit for Bosnia and Herzegovina.

[a] Registered unemployment unless otherwise stated.

[b] Figures cover only the Bosnian-Croat Federation.

[c] April.

[d] UNECE secretariat estimate. The Hungarian Statistical Office has stopped reporting the unemployment rate based on registrations since the beginning of 2001. The official estimate based on the labour force survey for April-June 2002 was 5.6 per cent.

[e] Data exclude Kosovo and Metohia.

[f] UNECE secretariat estimate. The Estonian Statistical Office calculates the rate as the number of registered unemployed as a percentage of the population between the age of 16 and pensionable age. The official figure for June 2002 based on this methodology was 5.5 per cent.

[g] The regional aggregate for the CIS reported in the table includes only the three largest economies, Kazakhstan, the Russian Federation and Ukraine, and is based on labour force surveys. The three countries, which account for nearly 80 per cent of the labour force of the CIS, are the only countries within the CIS that regularly report unemployment according to the ILO definition. The official data on registered unemployment in the CIS tend to underestimate substantially the actual level of unemployment in these countries.

[h] National Statistical Office's estimates according to the ILO definition.

[i] Registered unemployment.

In *central Europe*, unemployment worsened in the first half of 2002.[47] Hungary was the only country where the unemployment rate declined in the 12 months to June 2002 (table 1.2.6).[48] In Slovakia and Slovenia, the rate was basically unchanged from a year ago, but it increased in the Czech Republic and, particularly, in Poland. But the situation varied considerably: while the unemployment rate in June was between some 8 and 11 per cent in Hungary, the Czech Republic and Slovenia, it was over 17 per cent in Poland and Slovakia. In Poland, sluggish growth combined with the ongoing restructuring of unprofitable industries and the increased numbers of newcomers entering the labour market, led to a sharp rise in joblessness. The rate of unemployment in Poland has been growing by nearly two percentage points a year since 1999 and in March 2002 it reached a post-communist high of 18.1 per cent of the labour force. Despite the efforts of the government[49] the situation is not expected to improve in the short run as economic growth is likely to remain weak in 2002 and some state owned companies have already announced large lay-offs. The 2002 budget assumes that the unemployment rate will reach 18.5 per cent by the end of the year. National analysts, however, are less optimistic and believe that the rate could rise to 19-20 per cent of the labour force.[50]

There has also been a further deterioration in the labour markets of the *south-east European* transition economies. The average unemployment rate in this region in June 2002 is estimated at 17.5 per cent, 1 percentage point more than a year earlier. In the 12 months to June, unemployment increased in all countries of the region except Albania,[51] and with the exception of Romania, the unemployment rate was above 14 per cent and reaching some 30 per cent or more in Bosnia and Herzegovina, The former Yugoslav Republic of Macedonia and Yugoslavia. Chronic joblessness has been a persistent problem in south-east Europe for more than 10 years and is one of the causes of the region's volatility. Moreover, the extremely high levels of unemployment in some of these countries pose serious risks to the possibility of successful programmes of economic transformation.

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[47] In assessing the situation in central Europe it should be kept in mind that regional averages are heavily dependent on Poland's performance, which accounts for nearly 60 per cent of the region's labour force and where unemployment has increased substantially since 1999.

[48] Unlike the situation in 2000 and 2001, it seems that the slight year-on-year drop in unemployment in Hungary in the first half of 2002 was caused mainly by the decline in the labour force rather than by job creation, as employment actually stagnated in the first half of the year. For a more detailed discussion see, for example, PlanEcon, *Country Report*, Vol. XVIII, No. 9, 5 June 2002, pp. 31-32.

[49] The Polish Sejm (the lower house of Parliament) adopted earlier in the year a multi-faceted "anti-crisis" government programme where fighting unemployment is given a high priority. In June, the Labour Ministry launched a "First Job" programme whose cost is estimated at 330 million zloty and which is aimed at reducing the very high rate of unemployment (more than 40 per cent) among young people. Also, the recently adopted Labour Code aims at introducing more flexibility to the Polish labour market.

[50] *Interfax Poland Weekly Business Report*, 21 June 2002, quoted in *Dow Jones Reuters Business Interactive* (Factiva).

[51] The decline in unemployment, however, occurred against a background of declining employment which suggests departures from the labour force (the "discouraged" unemployed).

There are signs that dynamic economic growth in the *Baltic states* since 2000 has resulted for the first time in some easing of labour market tensions. In June 2002, their average unemployment rate stood at just above 9 per cent,[52] nearly 1 percentage point below that of a year earlier (table 1.2.6); however, the situation differed among the three countries. In Latvia the unemployment rate was basically unchanged from June 2001, but in Estonia and particularly in Lithuania, it was on a downward trend. In the 12 months to June, the unemployment rate in both countries was 1 percentage point or more below that of a year earlier. For both countries, this is the first year-on-year drop in the rates of unemployment since 1998.

Despite the continuation of relatively strong growth in the majority of the *CIS countries*, the official unemployment figures do not suggest any major changes in the first six months of 2002. The statistics of registered unemployment continue to be unreliable as a large proportion of the jobless do not register for various reasons. Estimates of unemployment based on labour force surveys, however, suggest improvement in the three CIS largest economies. In June 2002, the unemployment rate in Russia was 7.7 per cent and 8.8 and 9.7 per cent in Kazakhstan and Ukraine, respectively. In all three countries the rates were lower than in the first quarter of the year and 1 percentage point lower than a year earlier.

(iv) International trade

(a) Eastern Europe and the Baltic states

After a weak start, trade picks up in second quarter

After rapidly losing momentum in the last quarter of 2001 and a poor performance in the first months of 2002, the foreign trade of the east European and Baltic countries picked up noticeably in the second quarter, confirming to some extent the improved business and consumer confidence in the early spring in an imminent recovery of the global economy.[53] As a result, the region's export and import volumes rose on average by 3-4 per cent in January-June 2002, year-on-year,[54] while their aggregate dollar values increased 5 per cent for exports and 4 per cent for imports, according to preliminary data (table 1.2.7).[55]

TABLE 1.2.7

Merchandise trade of eastern Europe, the Baltic states and the CIS, 2001-2002

(Rates of change, year-on-year, and shares, per cent)

	Merchandise exports (growth rates)		*Merchandise imports (growth rates)*		*Trade balance (per cent of GDP)*	
	2001	*2002*[a]	*2001*	*2002*[a]	*2001*	*2002*[a]
Eastern Europe	10.6	5.6	8.5	3.7	-9.6	-8.8
Albania	17.6	-11.7	24.3	10.8	-24.6	-22.7
Bosnia and Herzegovina	18.5	8.7	2.2	59.9	-33.9	-48.1
Bulgaria	5.7	0.1	11.1	-0.5	-15.7	-13.9
Croatia	5.1	0.6	14.7	6.1	-22.4	-24.9
Czech Republic	14.9	8.9	13.4	4.8	-5.5	-2.2
Hungary	8.6	6.8	5.0	3.4	-6.1	-4.4
Poland	14.0	4.1	2.7	2.2	-8.0	-7.9
Romania	9.8	9.1	19.1	3.1	-10.5	-9.8
Slovakia	6.6	1.5	16.0	1.7	-9.7	-7.5
Slovenia	6.0	4.1	0.3	-0.3	-4.7	-2.7
The former Yugoslav Republic of Macedonia	-12.4	-12.2	-19.0	9.3	-15.2	-21.1
Yugoslavia	10.0	7.0	30.0	5.0	-28.4	-27.3
Baltic states	11.7	-1.2	9.1	7.7	-16.7	-18.5
Estonia	4.1	-14.0	0.8	-4.1	-17.8	-20.4
Latvia	7.3	3.6	10.0	9.8	-19.9	-19.5
Lithuania	20.3	6.9	15.1	15.4	-14.2	-17.0
CIS	-0.2	-5.5	15.6	2.7	14.9	13.5
Armenia	12.6	40.8	-1.8	2.6	-25.0	-24.2
Azerbaijan	32.6	-22.1	22.1	28.4	15.5	8.2
Belarus	1.3	1.9	-6.1	0.9	-5.1	-2.3
Georgia	-3.0	-10.0	5.1	-2.8	-11.4	-13.0
Kazakhstan	-5.2	-9.1	26.0	-3.1	10.3	8.7
Kyrgyzstan	-5.6	6.3	-15.7	31.7	0.6	-5.8
Republic of Moldova	21.0	0.7	15.5	9.6	-22.1	-24.2
Russian Federation	-2.1	-7.0	22.1	5.0	19.2	16.7
Tajikistan	-16.9	8.7	1.9	4.1	-3.4	-6.2
Turkmenistan	8.0	15.1	26.4	-15.3	7.5	15.3
Ukraine	11.6	1.5	13.0	3.2	1.3	2.7
Uzbekistan	-3.7	-13.6	6.0	-11.4	0.8	0.3
Total above	5.2	–	10.5	3.6	2.0	1.4
Memorandum items:						
CETE-5	11.4	5.8	6.8	2.9	-7.2	-5.9
SETE-7	7.2	4.3	14.8	6.7	-17.5	-19.0

Source: UNECE secretariat calculations, based on national statistics and direct communications from national statistical offices.

Note: Foreign trade growth is measured at current dollar values. Trade balances are related to GDP at current prices, converted from national currencies at current dollar exchange rates. GDP values, in some cases, are estimated from reported real growth rates and consumer price indices.

[a] January-June.

On the import side, the growth rates in dollar terms varied considerably: imports from western and, especially, from developing countries increased, while those from the CIS declined; on the export side, growth

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[52] In interpreting the unemployment figures in the Baltic states, one should take into consideration that the official figures for registered unemployment tend to underestimate the actual levels of unemployment although to a lesser extent than is the case in some of the CIS countries. In the second quarter of 2002, unemployment rates derived from labour force surveys were at 9.4 per cent in Estonia, 13.3 per cent in Latvia and 13.4 per cent in Lithuania, whereas the registered rates were 7, 7.9 and 12.6 per cent, respectively.

[53] In fact, between the first and second quarters of 2002, the volume of imports of goods and services into western Europe rose by 1.6 per cent (table 1.1.3).

[54] UNECE secretariat estimates, based on preliminary data from several east European and Baltic countries (table 1.2.9).

[55] The growth in euro terms was similar to that in dollars, since the euro strengthened significantly after March, pushing the average euro-dollar rate for January-June 2002 close to that in the same period of 2001.

TABLE 1.2.8

Foreign trade of eastern Europe, the Baltic states and the CIS by direction, 2000-2002
(Value in billion dollars, growth rates in per cent)[a]

	Exports				Imports			
	Value	Growth rates			Value	Growth rates		
Country or country group[b]	*2001*	*2000*	*2001*	*2002*[c]	*2001*	*2000*	*2001*	*2002*[c]
***Eastern Europe**, to and from:*								
World	147.2	12.9	10.7	5.6	187.3	10.9	8.5	3.7
ECE transition economies	29.9	12.1	11.6	6.4	41.6	27.9	5.5	-3.5
CIS	5.6	14.9	12.0	11.7	18.6	51.9	0.6	-10.4
Baltic states	1.5	15.2	26.4	15.3	0.5	50.8	-3.4	-19.8
Eastern Europe	22.8	11.3	10.7	4.7	22.5	11.5	10.1	3.1
Developed market economies	108.2	12.2	11.0	4.8	125.1	6.0	8.0	2.5
European Union	99.2	11.7	11.3	4.8	109.3	4.3	9.0	3.2
Developing economies	9.1	24.3	4.3	11.8	20.7	11.2	19.3	20.3
***Baltic states**, to and from:*								
World	9.9	24.4	11.7	-1.2	14.2	15.0	9.7	7.7
ECE transition economies	3.1	18.6	22.6	1.1	4.8	23.2	9.3	1.0
CIS	1.3	1.0	38.8	24.4	2.9	36.7	4.5	-8.8
Baltic states	1.3	27.9	10.0	-9.8	0.9	7.8	15.5	22.2
Developed market economies	6.4	26.0	5.1	-2.4	8.1	9.0	5.5	14.6
European Union	5.7	26.6	4.7	-3.7	7.1	9.9	5.5	15.6
Developing economies	0.5	47.2	55.7	0.7	1.2	37.2	50.1	-9.1
***Russian Federation**, to and from:*								
World	99.2	41.4	-3.8	-7.0	41.5	11.9	22.6	5.0
Intra-CIS	14.5	29.1	4.7	-5.0	11.1	39.1	-4.0	-25.3
Non-CIS economies	84.7	43.6	-5.1	-7.4	30.4	1.5	36.5	19.0
ECE transition economies	16.4	61.2	-8.0	-19.5	3.1	15.6	25.4	25.4
Baltic States	3.8	73.9	-22.8	-7.8	0.4	12.2	28.5	30.0
Eastern Europe	12.6	56.9	-2.3	-22.9	2.6	16.2	24.9	24.6
Developed market economies	46.8	38.1	-5.7	-7.6	20.5	3.0	33.1	15.6
European Union	36.6	49.1	-0.8	-8.2	15.3	-0.3	37.2	23.1
Developing countries	21.5	43.6	-1.3	3.7	6.8	-9.2	54.5	26.1
***Other CIS economies**, to and from:*								
World	42.8	34.2	4.7	-1.9	40.5	19.1	4.7	0.5
Intra-CIS	15.4	37.3	2.7	-17.2	21.7	30.8	2.7	-6.6
Non-CIS economies	27.4	32.4	5.9	7.5	18.8	7.2	5.9	9.3
***ECE transition economies**, to and from:*								
World	299.1	25.2	4.6	–	283.5	12.3	10.6	3.6

Source: National statistics and direct communications from national statistical offices to UNECE secretariat; State Customs Committee data for the Russian Federation; CIS Interstate Statistical Committee data for other CIS economies.

Note: In 2000, Estonia switched its basic trade statistics to a "special trade" reporting system; this change is reflected in the Baltic states aggregate growth rates starting in 2000.

[a] Growth rates are calculated on values expressed in dollars.

[b] For country groups see table 1.2.1.

[c] January-June 2002 over same period of 2001.

was broadly similar across the major markets (table 1.2.8). The increased presence of east European producers on western markets in spite of the sluggish demand and, often, the marked real appreciation of their domestic currencies, was most likely due in part to the strong intrafirm sales of multinational companies.[56]

In the first half of 2002, the terms of trade improved for a number of countries as import unit values in dollar terms declined, dampened by lower year-on-year world market prices for energy and some other commodities, while average export dollar prices remained flat or increased moderately under the impact of the evolution of manufactured goods prices and dollar depreciation.[57]

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[56] According to Eurostat data, the share of the three largest central European economies – the Czech Republic, Hungary and Poland – in total extra-EU imports increased from 6.1 per cent in the first half of 2001 to 6.9 per cent in January-June 2002. Eurostat, Euro-indicators, *News Release*, No 113/2002, 20 September 2002 (http://europa.eu.int/comm/eurostat/).

[57] Although picking up in recent months, world market prices in dollars (HWWA index) for energy resources were lower by 12 per cent on average in the first six months of 2002 as compared with January-June 2001; world commodity prices excluding energy were down by 7 per cent, while those for industrial raw materials were down 9 per cent (HWWA). According to national statistics, in January-June 2002, export unit values for manufactured goods in dollar terms were virtually unchanged in the Czech Republic and increased 2-3 per cent in Hungary and Poland. In the EU, export unit values in dollars for manufactured goods declined in January-March by 2.6 per cent, year-on-year (United Nations Statistical Division, *Monthly Bulletin of Statistics On-line*, http://unstats.un.org/unsd/mbs).

Thanks in part to this improvement in the terms of trade, eastern Europe's aggregate merchandise trade deficit narrowed by $0.6 billion in the first half of 2002, to $19 billion. The Czech, Hungarian and Slovene trade deficits fell considerably from their levels of a year earlier, thus lowering substantially the ratio of merchandise trade deficits to GDP (table 1.2.7). In the Baltic states, on the contrary, trade deficits widened substantially, to $2.4 billion.

The nearly 6 per cent rise in the aggregate dollar value of central European *exports* (CETE-5 in table 1.2.7) in the first six months of 2002 was driven mainly by the Czech and Hungarian performance, in spite of the sharp appreciation of their currencies in nominal and real effective terms.[58] In both countries, according to the national data, total export growth was backed by strong exports to the EU (growing some 7-8 per cent in dollar value and 4-5 per cent in volume) and by large increases of sales to developing countries, in particular to Asia (up 26-35 per cent in dollar value). Polish, Slovak and Slovene exports grew somewhat less by 2-4 per cent in dollar value, while their exports to their major EU market – Germany – actually fell. All the central European countries have increased exports to less traditional EU markets (Sweden, the Netherlands and the United Kingdom) generally on the basis of a limited range of manufactured goods (electronic equipment, road vehicles and furniture, as well as beverages).

Among the south-east European countries, Romania's exports were surprisingly strong in the second quarter of 2002 given external demand conditions and the appreciation of the leu in real effective terms: their dollar value grew by 17.5 per cent year-on-year thanks to increased sales to western and developing markets; in contrast, exports to the transition economies fell. Sales of apparel and footwear to the EU, mainly under OPT arrangements,[59] increased sharply, generating 46 per cent of Romania's exports to the EU in the first half of 2002. Yugoslavia, too, reported a double-digit growth of export value in the second quarter of 2002, albeit from low levels, raising the average increase for January-June to 7 per cent. In contrast, half-year exports from other south-east European countries were either lower in dollar value (Albania and The former Yugoslav Republic of Macedonia) or flat (Bulgaria and Croatia) when compared with January-June 2001. As regards export destinations, performance was quite diverse: Bulgaria, similarly to Romania, reported a sharp decline of exports to the transition economies, including a fall of nearly 30 per cent to CIS partners,[60] while in the case of Croatia the substantial fall of exports to developing countries dragged down the overall increase although exports to all its other major markets were on the rise.

In the Baltic states, national statistics for the second quarter of 2002 generally indicate a substantial improvement on the first quarter of 2002; in Latvia and Lithuania, exports were also higher than in the same period of 2001, while Estonia's remained below the level of the previous year.[61] According to preliminary data for the first half of 2002, Lithuanian exporters improved their position in all their major markets, with a 30 per cent rise in exports to the CIS and a 12 per cent increase to the EU. The latter occurred despite the repegging of the litas from the dollar to the euro on 1 February 2002 which created some strain as the euro appreciated against the dollar in the months that followed. A moderate rise of Latvian exports was mainly based on a 12 per cent increase in sales to the CIS and more than a doubling of exports to North America, whereas exports to the EU remained flat.

In the second quarter of 2002 *imports* into eastern Europe and the Baltic states gained some momentum, as a result of strong domestic demand. In Croatia, Estonia and Lithuania, they grew more rapidly than exports in both volume and value, boosted by surging private consumption and investment, and resulting in a considerable rise in their merchandise trade deficits.[62] Rapidly rising imports were also reported in Albania, Bosnia and Herzegovina, The former Yugoslav Republic of Macedonia and Latvia. In most other east European countries, the growth of dollar imports in the first half of 2002 was more subdued, and generally less than that of

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[58] In the Czech Republic, the value of exports expressed in current koruna actually fell by 2 per cent year-on-year in the first half of 2002, while in Hungary, the current domestic value of exports stagnated. Over the same period, the Czech koruna and Hungarian forint appreciated by some 9 to 12 per cent, year-on-year, in real effective terms, based on a unit labour cost deflator (UNECE secretariat calculations), although the full impact of this appreciation on exports might be felt only with a certain lag. Partly because of the pressure from major exporters, the Czech National Bank has tried to slow down the appreciation of the koruna by intervening several times in the currency markets and by cutting interest rates on 26 April 2002. In Hungary, too, the rapid appreciation of the forint along with the rapid growth of wages prompted appeals for government action. In September, five of Hungary's biggest exporters (Richter-Gedeon, Raba, Arago, Graphisoft and Wallis, with joint exports of $900 million in 2001) joined forces to lobby policy makers to curb the forint's strength by lowering interest rates and introducing some tax breaks, asserting that their attempts to offset the impact of a strong forint by improving their performance and hedging currencies had reached its limit (E. Bartha, "Hungarian exporters bemoan strong forint policy", *Reuters*, 11 September 2002).

[59] The EU-Romanian OPT transactions picked up in the second half of the 1990s and have continued to rise, due to the abundance of skilled labour and low wages: the average monthly wages in Romania's industry amounted to $163 in the second quarter of 2002, two to three times lower than in central European and Baltic countries and just slightly higher than in Bulgaria.

[60] This was partly due to the product structure of these exports: not only the demand but also the dollar prices for industrial raw materials and chemicals, as well as foodstuffs exported to the CIS, were substantially down, year-on-year.

[61] During the first half of 2001, Elcoteq – a major exporter in 2000 – had been closing down its production operations in Estonia, but maintained a high level of reported export sales, probably in part by inflating unit values for intrafirm transactions (UNECE, *Economic Survey of Europe, 2001 No. 2*, p. 22). This generated a high base-year effect that will dissipate in the second half of the year, and the average rate of export growth in July-December 2002 is likely to be positive.

[62] According to preliminary data for January-June 2002, the ratio of merchandise trade deficits to GDP in all three countries rose some 3 percentage points, reaching 24 per cent in Croatia, 20 per cent in Estonia and 17 per cent in Lithuania.

TABLE 1.2.9

Changes in the volume of foreign trade in selected east European, Baltic and CIS economies, 1999-2002

(Per cent)

	Exports					Imports				
				2002[a]					2002[a]	
	1999	2000	2001	Jan.-Mar.	Jan.-Jun.	1999	2000	2001	Jan.-Mar.	Jan.-Jun.
Eastern Europe [b]	7.3	19.3	10.2	0.6	3.9	6.6	14.7	7.2	1.9	4.0
Bulgaria	..	..	11.4	1.1	2.8	..	..	16.4	0.2	0.6
Croatia	-2.7	-1.3	7.2	-4.9	0.4	-4.2	3.7	15.6	5.6	3.6
Czech Republic	9.4	18.7	12.7	3.7	5.3	5.1	19.9	13.4	1.3	3.4
Hungary	15.9	21.7	7.7	2.2	5.2	14.3	20.8	4.0	1.5	2.9
Transition economies [c]	-9.3	22.5	16.1	3.7	4.1	6.0	17.1	1.8	6.1	8.0
European Union	20.6	21.3	6.9	0.7	4.7	14.6	14.4	2.5	-4.0	-1.5
Poland	2.0	25.3	11.8	-2.3	2.7	4.4	10.8	3.2	2.5	6.4
Transition economies [c]	-9.3	25.1	18.8	10.5	12.9	7.8	16.7	4.4	2.8	3.9
European Union	5.4	26.8	10.8	-4.0	1.0	4.1	10.5	2.6	0.6	4.9
Slovenia	3.7	11.4	5.3	0.3	3.0	9.2	4.1	0.6	0.8	1.2
The former Yugoslav Republic of Macedonia	-7.4	15.3	..	..	..	-5.1	14.9	..	..	..
Baltic states	-7.7	25.4	6.1	-6.4	-0.7	-9.3	15.2	13.1	4.2	9.0
Estonia [d]	0.9	41.1	-19.2	-34.9	-19.9	-9.0	34.9	3.3	-10.7	-3.7
Latvia	-2.1	13.6	8.2	1.4	3.2	-3.2	5.1	11.9	3.6	6.9
Lithuania	-16.3	19.2	23.5	10.8	11.4	-13.0	7.4	20.4	14.6	18.8
Russian Federation	9.4	10.2	2.8	6.6	9.7	-15.6	29.2	29.8	23.0	17.6
Non-CIS	11.3	9.9	1.8	3.5	7.2	-19.4	28.6	43.9	37.3	30.8
CIS	1.5	12.5	9.5	25.5	25.5	-4.8	30.6	2.8	-7.4	-10.8
Memorandum items:										
CETE-4	8.3	21.1	10.4	1.0	4.2	7.5	15.4	6.1	1.8	4.2
BSEE	6.2	19.7	9.9	0.1	3.5	5.2	14.7	7.7	2.1	4.5

Source: UNECE secretariat calculations, based on national foreign trade statistics.

Note: The dollar values of exports and imports in 2001 are used as weights in calculating aggregate growth rates. CETE-4: the Czech Republic, Hungary, Poland and Slovenia; BSEE: the Baltic states and eastern Europe.

[a] Over the same period of 2001.

[b] The regional aggregate refers only to the seven countries listed below.

[c] Transition economies refer to east European countries, including the Baltic states and the four European CIS member countries.

[d] Volume growth rates for Estonia calculated on export and import values according to the special trade reporting system.

exports. Imports from western partners grew on average by some 3 per cent in dollar value, whereas those from the CIS shrank by 10 per cent or more.

The weaker growth of the dollar value of imports was not only due to improved terms of trade and the appreciation of domestic currencies: except for Poland, import growth in volume terms was also rather moderate (table 1.2.9). The relatively slow growth of industrial activity, which in much of the region is highly dependent on imported inputs, was another important factor. Also, with a rather narrow range of goods accounting for the current growth in exports, part of local capacity that had earlier been allocated to exports was reoriented to the domestic market, substituting domestic sales for imports.

Recent data underline the fragility of expectations for euro area recovery, and there are growing concerns about the poor performance of the three major economies, particularly Germany and Italy. As a result, the export expansion of eastern Europe and the Baltic states seems to have slowed down in July and August. However, this not only reflects a further weakening of business and consumer confidence in western Europe, but also the impact of the August floods in central Europe, which temporarily halted production in several important industrial regions, damaged agricultural output and disrupted road and rail transport. In turn, imports seem to be picking up, boosted in some countries by the buoyancy of private consumption or the recovery of investment (Hungary, Romania and the Baltic states), or in others in anticipation of the implementation of already announced fiscal measures.[63]

(b) *International trade of the CIS countries*

Lower commodity prices affect export earnings

In the first six months of 2002, the dollar value of *total merchandise exports* from the CIS decreased by 6 per cent, year-on-year, largely due to lower commodity prices (table 1.2.7). Prices of virtually all major CIS natural resource exportables declined, except the gold price, which rose by 6 per cent.[64] The continuing economic rebound in the CIS region – still driven by strong demand for consumer and capital goods – as well as exchange rate appreciations in real terms against the dollar and the euro helped to boost imports from the non-CIS area. Intra-CIS regional trade, in contrast, decreased by some 12 per cent in dollar value, largely mirroring the lower values of trade with Russia.

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[63] For example, this introduces the new tighter registration measures including higher fees on imported second-hand cars introduced in Poland in October 2002.

In Russia, the largest CIS natural resource exporter, oil producers sought to boost their export revenues by increasing the volume of crude oil and oil products shipped (by 15 and 17 per cent, respectively). Shipments of Russian natural gas also increased albeit by a much smaller amount (3 per cent). Despite the volume increases of these three key items the dollar value of Russia's exports declined by 7 per cent.[65] There were similar declines in Azerbaijan, Kazakhstan and Uzbekistan where the decreases ranged from between 9 per cent in Kazakhstan to 22 per cent in Azerbaijan.[66]

All other countries, except Georgia which has continued to face problems in shipping its goods to Russia and has banned scrap metal sales abroad (see below), increased their dollar value of their total exports. The increases ranged from 1-2 per cent in Belarus, the Republic of Moldova and Ukraine to 41 per cent in Armenia, which posted the largest increase within the CIS on the strength of doubling its exports of jewelry and precious stones. In the Republic of Moldova, strong sales of foodstuffs offset declines in other sectors while Belarus and Ukraine managed small increases in export earnings as a result of considerably greater shipments of oil products.

The value of *total CIS imports* increased by 3 per cent in the first six months of 2002 on the strength of the continuing output growth in the region. In particular, increased import demand in Russia, reflected in a 20 per cent increase in the value of imports of machinery and equipment, contributed to this outcome.[67] There were also large increases in Azerbaijan and Kyrgyzstan where imports rose by about a third in value. Only in Turkmenistan and Uzbekistan did total imports fall significantly (by 11-15 per cent), while in Georgia and Kazakhstan there were only slight falls (of 3 per cent). In the first half of 2002, the CIS area's merchandise trade surplus fell by about $5 billion compared with the same period of 2001, mainly because of lower commodity prices.

In the first half of 2002, the dollar value of *CIS exports to non-CIS countries* fell by 4 per cent (table 1.2.10). The value of exports of traditional commodity exporters such as Azerbaijan, Kazakhstan, Russia and Uzbekistan fell by between 1 to 24 per cent, depending on the combination of volume changes and much lower export prices. The largest decline was in Azerbaijan (down 24 per cent) where technical problems with the oil pipeline compounded the impact of falling prices, while the smallest was in Uzbekistan where higher gold prices likely helped to cushion the impact of lower prices for other commodities.[68] In Russia, there was a 7 per cent decline in the value of non-CIS exports and Georgia's exports to non-CIS markets decreased by 11 per cent affected by the introduction of a temporary ban on sales of scrap metal (traditionally shipped to Turkey).

Other CIS countries' exports to the rest of the world increased. Armenia had the highest growth in export revenue from non-CIS sales (up 64 per cent) driven by a doubling of foreign sales of precious stones and metals, mostly to Belgium. Belarus, Kyrgyzstan, Tajikistan and Ukraine recorded strong gains in the 15-25 per cent range. In Belarus the gains were based on a $200 million increase in the value of sales of oil products largely achieved by redirecting shipments away from the CIS markets. Similarly, the value of Ukrainian oil product exports increased strongly (by 40 per cent), more than offsetting the effect of flat steel sales. Kyrgyzstan benefited from the rising gold price despite reduced volumes. In contrast, increased volumes of aluminium and cotton offset lower commodity prices and contributed to the growth of Tajikistan's non-CIS exports by 25 per cent.

Strong domestic demand boosts imports from the non-CIS area

The total value of *CIS imports from non-CIS countries* rose by 15 per cent (table 1.2.10); dollar imports increased in most countries ranging from 10 per cent in the Republic of Moldova to 28 per cent in Tajikistan. Higher non-CIS imports were often related to increased imports of machinery and equipment to upgrade capital stock in the oil, natural gas and metal sectors. This was the case in varying degrees in Azerbaijan, Kazakhstan and Russia where imports of machinery and equipment from non-CIS markets in January-May increased, year-on-year, by 42, 9 and 29 per cent, respectively. In addition, real personal disposable

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[64] Relative to the first six months of 2001, crude oil prices fell by 13 per cent, gasoline prices by almost a fifth and the average export price of Russia's natural gas by an estimated 17 per cent. The price of cotton – a major export commodity in central Asia – was down by a third, while prices for base metals such as aluminium, copper and nickel were between 1 and 11 per cent lower.

[65] All volume data are based on the first five months of 2002, and changes are year-on-year.

[66] In Kazakhstan, despite the volume of crude oil exports increasing by 11 per cent, revenues declined by 15 per cent. Similarly, the increased volumes of foreign sales of steel and zinc did not result in revenue increases. *Sotzial'no-ekonomicheskoye razvitye, Kazahstan*, 6/2002, pp. 51-52. All data are for January-May 2002.

[67] The capital goods sector accounts for about a third of the Russian total. All data are for January-May 2002.

[68] Export revenues from cotton in Uzbekistan – 85 per cent of which goes to non-CIS markets – are reported to be about 20 per cent lower than in the first six months of 2001. Uzreport.com, quoted in *Reuters Business Briefing*, 25 September 2002.

TABLE 1.2.10

CIS countries' trade with CIS and non-CIS countries, 2000-2002

(Value in million dollars, year-on-year, growth rates in per cent)

	Export growth		*Import growth*		*Trade balances*		
	2001	*2002*[a]	*2001*	*2002*[a]	*2000*	*2001*	*2002*[a]
Armenia							
Non-CIS	10.8	63.7	-7.9	-5.5	-484.0	-403.3	-102.9
CIS	18.4	-13.2	23.1	29.3	-100.2	-126.8	-78.8
Azerbaijan							
Non-CIS	38.5	-24.2	23.7	16.1	713.4	1 105.7	429.5
CIS	-5.2	2.4	18.6	48.1	-140.3	-222.3	-222.3
Belarus							
Non-CIS	1.0	19.9	- 4.2	10.5	375.8	512.9	523.8
CIS	1.6	- 10.1	-6.9	-3.0	-1 619.3	-1 133.5	-665.6
Georgia							
Non-CIS	-11.1	-10.5	2.3	-5.3	-225.8	-257.6	-132.1
CIS	9.1	-9.4	10.3	1.4	-95.0	-106.5	-69.9
Kazakhstan							
Non-CIS	-10.9	-1.0	33.2	20.7	4 455.7	2 957.6	1 350.6
CIS	10.8	-27.1	19.9	-21.7	-380.6	-673.7	-395.0
Kyrgyzstan							
Non-CIS	3.5	14.8	-17.7	22.9	41.5	97.3	48.8
CIS	-18.7	-9.5	-13.9	39.3	-91.1	-88.3	-82.5
Republic of Moldova							
Non-CIS	14.4	14.1	7.7	9.6	-321.2	-332.9	-170.7
CIS	25.6	-6.4	31.0	9.7	16.3	6.4	8.4
Tajikistan							
Non-CIS	7.2	25.4	29.8	27.5	295.2	290.4	161.1
CIS	-43.4	-17.0	-3.9	-1.7	-185.9	-326.3	-185.6
Turkmenistan							
Non-CIS	8.3	7.1	27.3	-1.3	100.0	-100.0	-150.0
CIS	7.7	21.4	25.0	- 37.5	620.0	550.0	550.0
Ukraine							
Non-CIS	15.0	15.1	17.4	14.2	4 158.9	4 646.4	2 656.1
CIS	4.0	-26.5	9.9	-4.8	4 675.4	-4 156.8	-2 175.3
Uzbekistan							
Non-CIS	-1.9	-1.0	6.7	-13.3	290.0	130.0	110.0
CIS	-7.0	- 35.1	4.8	-7.8	90.0	-40.0	-100.0
Total above							
Non-CIS	5.9	7.5	13.8	9.3	9 399.5	8 646.5	4 724.2
CIS	2.7	-17.2	6.3	-6.6	-5 428.5	-6 317.8	-3 416.6
Russian Federation							
Non-CIS	-5.1	-7.4	36.5	19.0	66 994.6	54 324.8	23 966.6
CIS	4.7	-5.0	-4.0	-25.3	2 219.6	3 344.8	2 136.0
CIS total							
Non-CIS	-2.6	-3.9	26.8	15.2	76 394.1	62 971.3	28 690.8
CIS	3.7	-11.5	2.6	-13.4	-3 208.9	-2 973.0	-1 280.6

Source: CIS Statistical Committee (Moscow); UNECE estimates for Turkmenistan and Uzbekistan.

[a] January-June.

incomes in Russia increased by about 10 per cent in the first half of 2002, leading to increased imports of consumption goods. In contrast, lower non-CIS imports into Uzbekistan reflected reduced spending (by about 10 per cent) on foreign capital goods. The government also intends to introduce a number of measures that will further discourage imports on non-food consumer goods.[69] The value of non-CIS purchases also fell in Armenia, Georgia and Turkmenistan by 1-6 per cent, partly influenced in the first two countries by weaker national currencies against the dollar.

The real appreciation of national currencies in some CIS countries such as Belarus, Kyrgyzstan, the Republic of Moldova, Russia and Ukraine coincided with increases in non-CIS imports. In the first six months of 2002, the national currencies of these countries appreciated by up to 8 per cent in real terms against the dollar and the euro. In Armenia, Azerbaijan and Georgia, however, their currencies depreciated by about 4 per cent in real dollar terms.

In the first half of 2002, the value of *intra-CIS trade* decreased by some 12 per cent. The relatively strong growth of domestic demand in Russia does not appear to have led to increased demand for imports from the neighbouring economies; on the contrary, in the first half of 2002, year-on-year, Russia's imports from the CIS area fell by a quarter in value.[70] About half of the reduction was accounted for by lower imports from Ukraine, probably due to last year's imposition of VAT by Russia on Ukrainian imports. The total value of Russian exports to the CIS region also fell despite an 80 per cent increase in shipments of crude oil in the first five months of 2002. Belarus, Kazakhstan and Ukraine, together with Russia – where half of intraregional exports originate – account for 95 per cent of intra-CIS exports. As noted above, the 10 per cent decline in Belarus was partly the result of shifting gasoline exports to western Europe from the CIS area, while the 27 per cent cut in Kazakh exports was due to lower volumes of crude oil and generally lower prices for the country's key exports.

Overall, the value of almost all the CIS countries' intraregional exports decreased, the declines ranging from about a third in Kazakhstan, Ukraine and Uzbekistan to 5-6 per cent in the Republic of Moldova and Russia. Only two countries increased such exports: in Azerbaijan the change was small (2 per cent) while Turkmenistan's 21 per cent growth reflected continued sales of natural gas to Ukraine.

All CIS currencies depreciated in real terms against the Russian rouble, by some 4-17 per cent in the first six months of 2002. Armenia, Azerbaijan and Georgia's national currencies weakened the most (by 15-17 per cent), while those of Belarus, Kazakhstan, Kyrgyzstan and the Republic of Moldova depreciated by about 10 per cent. These changes do not appear to have had a significant influence on bilateral trade with Russia, as a large proportion of such trade is either based on long-term contracts (including barter arrangements) or is settled on a dollar basis.

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[69] On 1 August 2002 the government imposed a 30 per cent tariff on non-food consumer goods (in addition to VAT) by enterprises and registered traders. Individuals importing these items are required to pay a 90 per cent custom tariff, payable in hard currency. EIU, *Country Report: Uzbekistan*, September 2002 (London), p. 31.

[70] Similarly in 2001, despite a 5 per cent growth in GDP in Russia, its imports from the CIS area declined by 4 per cent in value, but this was due to lower import prices as the volume increased by 3 per cent. In the first half of 2002, the volume of Russian exports to CIS countries increased by a quarter, while the volume of its imports from the area fell by more than 10 per cent (table 1.2.9).

(v) Current accounts and external financing

(a) Current account balances

Deficits remain high but are easily financed

In the first half of 2002, the combined current account surplus of the transition economies continued to decline, to $2 billion (table 1.2.11),[71] due to the diminishing surplus of Russia and larger current account deficits of many other countries. Even though these deficits are often large by widely accepted criteria, they generally appear to have been easily financed and are likely to remain so. In particular, FDI, largely a non-debt creating inflow, has remained a major source of finance.

On balance the external economic conditions facing the transition economies continued to worsen in 2002. Economic activity in western Europe remained subdued while the slower rate of expansion of the Russian economy translated into lower CIS exports to this major market. However, the decline in international oil prices was reversed in the second quarter of 2002 and that slowed the fall in the export earnings of several fuel producers, especially Russia. These factors resulted in considerable differences in the movement of current account balances among the countries of the region, changes that also reflect differences in the growth of domestic demand, export performance and movements in real exchange rates.

Data for the first half of 2002 indicate a marginal increase in the combined deficit of eastern Europe and the Baltic states, to nearly $13 billion (although the current account-GDP ratio fell to 5.4 per cent). During the first six months of the year there was a notable slowdown in the value of exports of services while imports of services accelerated, which is in contrast to developments in this sector in 2001. Another negative development was the rise in net income payments abroad, boosted by the increasing repatriation and reinvestment of profits by foreign investors. At the same time, net transfers to these countries from abroad continued to rise, mostly due to remittances from the increasing number of east Europeans working abroad.

The majority of east European and Baltic countries had larger current account deficits in the first half of 2002. In Hungary, the rapid growth of imports of goods and services (boosted by an expansionary fiscal policy) and smaller tourist revenues caused the officially reported current account deficit to double, despite relatively buoyant export growth.[72] In Slovakia, recent merchandise trade data suggest that the deterioration of the current account deficit has been arrested. Preliminary estimates for south-east Europe show that larger merchandise trade deficits were mainly responsible for the worsening of current account deficits (Romania is an exception, see below)[73] but Croatia benefited from a surge in revenues from tourism. In the Baltic states there was a rapid expansion of domestic demand and to varying degrees these economies were affected by weak exports of goods and services, all resulting in larger current account deficits. However, Latvia and Lithuania benefited from larger surpluses on service transactions, and Latvia from considerably larger transfers.

The Czech Republic, Poland and Slovenia had better current account results than in the first half of 2001. In the Czech Republic, buoyant exports of goods and services (but not tourism) more than offset the impact on imports of a loose fiscal policy, but there was further growth of profit repatriation. Poland's current account deficit continued to shrink in 2002 with tight monetary policy curbing domestic demand and imports of goods and services. Slovenia is one of the few transition economies to post a (larger) current account surplus, thanks to the growth of merchandise exports and receipts from transport services. In Romania, the continuing strong growth of exports of goods and services and increasing transfers more than offset a larger outflow of income abroad. Imports of goods and services were held down by a tight fiscal policy.

In the CIS there was considerable variation in country experiences. In the second quarter of 2002, the sharp upturn in oil prices slowed the downward trend in the current account surplus of Russia. Whereas projections made early in the year pointed to an expected surplus of around 5 per cent of GDP for 2002 as a whole, the surplus in January-June was nearly twice as large. Despite the recent upturn in fuel prices, Russian merchandise exports declined in the first half of 2002, but revenues from a broad range of services continued to rise. Although the expansion of imports of goods and services slowed sharply, service imports, in particular expenditures on tourism, were very buoyant. Imports have been boosted by domestic demand and the real appreciation of the rouble.

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[71] This section is based on national balance of payments statistics. Some of the results for merchandise trade may differ from those discussed in sect. (iv) which is based on customs data. Only fragmentary data are available for the non-European CIS and some south-east European countries, particularly as regards the financial account. Turkmenistan ceased to publish balance of payments data in 1998.

[72] It should be borne in mind that the country's officially reported current account deficit as shown in table 1.2.11 has been understated because of the national practice of excluding reinvested earnings from FDI. The OECD has estimated that reinvested earnings amounted to some $2 billion in 2001. OECD, *Economic Surveys: Hungary*, Vol. 2002/10 (Paris), June 2002, tables 5 and 6. Inclusion of this outflow raises the current account deficit in 2001 from $1.1 billon to around $3.1 billion (alternatively, from 2.1 to 5.9 per cent of GDP). Hungary's current account deficit is expected to rise to about $2.5 billion in 2002, but the inclusion of reinvested earnings (assuming little change from 2001) would raise the deficit to about $4.5 billion (about 7.4 per cent of GDP). It should be noted that the inclusion of reinvested earnings (a debit) in the current account does not change the overall balance of payments because these earnings also enter the financial account (as credit). Accordingly, Hungary's official data on net financial and FDI inflows (tables 1.2.12 and 1.2.13) are also understated.

[73] It is likely that the current accounts deficits of many of these countries are understated because of various deficiencies in customs reporting, smuggling, and so on. The larger deficits are financed by cash inflows that are also underreported. The same pattern is likely to hold in some other transition economies, particularly in the CIS.

TABLE 1.2.11

Current account balances in eastern Europe, the Baltic states and the CIS, 2001-2002
(Million dollars, per cent)

	Million dollars			*Per cent of GDP*		
		Jan.-Jun.			*Jan.-Jun.*	
	2001	*2001*	*2002*	*2001*	*2001*	*2002*
Eastern Europe	-18 594	-11 800	-11 734	-4.4	-6.0	-5.4
Albania	-218	-109	-204*	-5.3	-5.4	-8.8
Bosnia and Herzegovina	-1 006	-370*	-400*	-22.1	-15.4	-15.9
Bulgaria	-842	-390	-381	-6.2	-6.5	-5.7
Croatia	-642	-1 452	-1 459	-3.3	-15.5	-14.4
Czech Republic	-2 625	-1 260	-985	-4.6	-4.7	-3.1
Hungary [a]	-1 105	-888	-1 631	-2.1	-3.7	-5.6
Poland	-7 166	-4 440	-3 956	-4.1	-5.2	-4.6
Romania	-2 317	-1 306	-909	-5.8	-8.0	-5.1
Slovakia	-1 756	-785	-868	-8.6	-7.9	-8.0
Slovenia	31	-36	144	0.2	-0.4	1.4
The former Yugoslav Republic of Macedonia	-324	-175	-187	-9.3	-9.9	-10.2
Yugoslavia	-624	-590*	-898*	-6.0	-11.4	-14.5
Baltic states	-1 648	-565	-1 021	-6.6	-4.7	-7.8
Estonia	-340	-114	-372	-6.2	-4.2	-12.3
Latvia	-735	-193	-257	-9.7	-5.3	-6.7
Lithuania	-574	-258	-392	-4.8	-4.6	-6.3
CIS	32 962	20 710	14 879	8.0	11.2	7.3
Armenia	-196	-90	-30*	-9.3	-12.9	-4.0
Azerbaijan	-52	43	-350*	-0.9	1.9	-13.8
Belarus	-281	38	102	-2.3	0.7	1.6
Georgia	-211	-114	-120*	-6.6	-7.5	-7.7
Kazakhstan	-1 749	-524	-600*	-7.9	-5.2	-5.5
Kyrgyzstan	-16	1	-10*	-1.0	0.1	-1.7
Republic of Moldova	-100	-34	-44	-6.7	-5.7	-6.6
Russian Federation	34 575	20 842	14 879	11.2	14.9	9.5
Tajikistan	-160	-93	-100*	-15.2	-24.6	-25.1
Turkmenistan	..	..	..	..	..	..
Ukraine	1 402	834	1 322	3.7	5.2	7.5
Uzbekistan	50*	47	-70*	0.4	1.0	-1.8
Total above	12 720	8 344	2 124	1.5	2.1	0.5
Memorandum items:						
CETE-5	-12 621	-7 408	-7 296	-3.9	-4.8	-4.3
SETE-7	-5 973	-4 392	-4 438	-6.3	-10.2	-9.4
Asian CIS	-2 634	-970	-1 380	-4.9	-4.3	-5.9
Three European CIS	1 022	838	1 380	2.0	3.8	5.6

Source: UNECE secretariat, based on national balance of payments statistics; IMF, *Staff Country Reports* (Washington, D.C.), for Bosnia and Herzegovina, Yugoslavia, Tajikistan and Uzbekistan (www.imf.org); TACIS, *Azerbaijan Economic Trends* (Baku) for Azerbaijan (www.economic-trends.org).

Note: UNECE secretariat estimates of the current accounts of Bosnia and Herzegovina, Yugoslavia, Armenia, Georgia, Tajikistan and Uzbekistan (January-June 2002) reflect their reported changes in merchandise trade in that period. Estimates for Albania, Azerbaijan, Kazakhstan and Kyrgyzstan also incorporate first quarter 2002 current account data. Turkmenistan no longer publishes balance of payment data.

[a] Excludes reinvested profits (a debit). See text.

Against the backdrop of a subdued climate for CIS exports of goods and services, fragmentary data and estimates indicate some deterioration in the current account balances of most CIS countries. However, Belarus and Ukraine, two countries with limited access to external finance, reported current account surpluses. As regards the fuel producers, the higher oil prices have slowed the growth of Kazakhstan's current account deficit. However, the balance of Azerbaijan deteriorated sharply because of a boom in imports of goods and services, the latter presumably oilfield services associated with foreign investment. Trade data for Turkmenistan indicate an upturn in natural gas exports that has generated a trade surplus and probably a current account surplus as well.

(b) External financing and FDI

Capital inflows increase despite the global environment

Preliminary data for the first half of 2002 indicate a further marked increase in *net capital and financial flows* into the transition economies (table 1.2.12). This is noteworthy as it occurred despite the unfavourable global economic environment and heightened risk aversion among investors.[74] However, several factors such as the progress towards macroeconomic stabilization, the continuing structural reforms, comfortable (or improving) external financial positions and approaching EU membership for a large group of candidate countries, have also worked in favour of the transition economies, reducing international investors' perception of risk. This, together with the willingness of investors to differentiate among countries, has contributed to the improving creditworthiness of some transition economies (see below) and brought down borrowing costs in the past two years. In consequence, the transition economies have largely avoided financial contagion, although the situation varies considerably across countries: while some of the advanced reformers even tend to be considered as safe havens by investors during periods of market turbulence, the situation in many of the CIS and some south-east European countries has tended to discourage private (and in some cases even official) inflows.[75]

About half of all the east European and Baltic countries attracted more capital in the first half of 2002, in particular the Czech Republic. FDI strengthened its position as the leading source of finance. Net portfolio investment declined due to the sell-off in the equity markets of several countries, although this was partially offset by the stronger demand for local bonds and an increase in new international bond issues. Medium and long-term borrowing remained marginal, but there was a surge in short-term flows, following several years of large outflows. In general financial inflows exceeded current account deficits and most countries continued to accumulate official reserves.

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[74] The IIF has estimated that capital flows to a selection of emerging market economies will stagnate at some $140 billion in 2002, which reflects a further decline in private capital flows. IIF, *Capital Flows to Emerging Market Economies* (Washington, D.C.), 18 September 2002.

[75] Concerns persist regarding the debt sustainability of Armenia, Georgia, Kyrgystan, the Republic of Moldova and Tajikistan. IMF and World Bank, *Poverty Reduction, Growth and Debt Sustainability in Low-income Countries* (Washington, D. C.), 3 February 2002. Several of these countries have recently benefited from the restructuring of their official debt obligations.

TABLE 1.2.12

Net capital flows into eastern Europe, the Baltic states and the CIS, 2001-2002

(Million dollars, per cent)

	Capital and financial account flows[a]					*Changes in official reserves*[b] *(million dollars)*	
	Million dollars			*Capital flows/GDP (per cent)*			
		Jan.-Jun.			*Jan.-Jun.*		*Jan.-Jun.*
	2001	*2001*	*2002*	*2001*	*2002*	*2001*	*2002*
Eastern Europe	25 952	16 450	17 592	6.2	8.2	7 358	5 851
Albania	363	181	214*	8.8	9.2	145	10*
Bosnia and Herzegovina	1 771	440	350	38.9	13.9	765	-50*
Bulgaria	1 117	227	427	8.2	6.4	275	46
Croatia	1 955	1 979	1 945	10.0	19.2	1 313	486
Czech Republic	4 390	1 773	6 014	7.7	18.9	1 765	5 028
Hungary[c]	1 008	1 956	173	1.9	0.6	-97	-1 459
Poland	6 726	5 169	3 896	3.8	4.5	-440	-60
Romania	3 801	2 465	1 748	9.6	9.7	1 484	839
Slovakia	1 899	578	457	9.3	4.2	143	-411
Slovenia	1 254	641	387	6.7	3.9	1 285	531
The former Yugoslav Republic of Macedonia	407	319	200	11.6	11.0	82	7
Yugoslavia	1 261	724	1 781	12.2	28.7	637	883*
Baltic states	2 231	609	1 458	8.9	11.2	583	438
Estonia	293	7	402	5.3	13.2	-47	29
Latvia	1 040	226	192	13.7	5.0	305	-65
Lithuania	899	376	865	7.5	14.0	325	473
CIS	-22 448	-12 951	-7 903	-5.4	-3.9	10 514	6 976
Armenia	216	88	..	10.2	..	20	..
Azerbaijan	317	26	330*	5.5	13.0	265	-20*
Belarus	276	12	-99	2.3	-1.6	-5	3
Georgia	258	120	..	8.1	..	47	..
Kazakhstan	2 133	750	900*	9.6	8.2	384	300*
Kyrgyzstan	3	-18	-10*	0.2	-1.7	-13	-20*
Republic of Moldova	109	24	27	7.4	3.9	10	-18
Russian Federation	-26 363	-13 672	-8 285	-8.5	-5.3	8 212	6 594
Tajikistan	168	87	86*	16.0	21.6	8	-14*
Turkmenistan	..	..	..	..	..	..	..
Ukraine	204	-452	-1 182	0.5	-6.7	1 606	140
Uzbekistan	80*	-76	..	0.7	..	130	..
Total above	5 736	4 109	11 147	0.7	2.6	18 456	13 268
Memorandum items:							
CETE-5	15 277	10 117	10 927	4.7	6.5	2 657	3 630
SETE-7	10 675	6 334	6 665	11.2	14.1	4 702	2 221
Asian CIS	3 326	1 137	1 636	6.2	7.0	692	256
Three European CIS	589	-416	-1 254	1.1	-5.1	1 610	126
Russian Federation[d]	-17 177	-9 844	-6 951	-5.5	-4.5	8 212	6 594

Source: UNECE secretariat, based on national balance of payments statistics; IMF, *Staff Country Reports* (Washington, D.C.), for Bosnia and Herzegovina, Yugoslavia, Tajikistan and Uzbekistan (www.imf.org); TACIS, *Azerbaijan Economic Trends* (Baku), for Azerbaijan (www.economic-trends.org).

Note: Estimates for Bosnia and Herzegovina, Yugoslavia and Tajikistan are one half of the relevant IMF projections for the full year. Estimates for Azerbaijan, Kazakhstan and Kyrgyzstan reflect first quarter 2002 results and quarterly changes in 2001. Turkmenistan no longer publishes balance of payment data.

[a] Includes errors and omissions; excludes changes in official reserves.

[b] A negative sign indicates a decrease in reserves.

[c] Excludes reinvested profits (a credit). See text.

[d] Excluding errors and omissions.

Although remaining substantial, the net outflow of capital from Russia declined further in the first half of 2002.[76] Among other things, this reflects a reversal of the substantial build-up of residents' deposits abroad, the cessation (on a net basis) of new medium-term lending to foreigners, a steep decline in the net repayment of medium-term funds and a sharp reduction in unrecorded capital outflows (as reflected in the errors and omissions item of the balance of payments). The overall outcome was a smaller net outflow of private capital (including less capital flight), *inter alia,* due to diminishing non-repatriation of export income and reduced prepayments for imports. The better-than-expected current account surplus and the slowing of net financial outflows raised official reserves to $44 billion in early October (nearly five months' of import cover); projections for end-of-year reserves have been raised to $47 billion. This, and provisions in the draft budget for 2003, have boosted confidence that Russia will meet its sharply higher debt servicing obligations in 2003 and beyond.

Among the European CIS, net capital outflows, financed at least in part by current account surpluses, continued from Belarus and Ukraine,[77] accelerating sharply in the latter. Both countries appear to have experienced substantial capital flight that has limited the accumulation of official reserves. The Republic of Moldova received only small amounts of FDI and short-term funds and had to draw heavily on its reserves.

Bond issuance by the transition economies picked up in the first nine months of 2002, the $7.7 billion raised exceeding the $6.3 billion in all of 2001. Margins generally improved for sovereign borrowers, which accounted for the bulk of all the issues. There was an increase in corporate issues (to over $2 billion), primarily by energy producers in Estonia, Kazakhstan and Russia (Sibneft, Gasprom and Tyumen Oil). The Republic of Poland was the largest individual borrower (raising about $2.1 billion), partly because of its need to finance a widening fiscal gap. Bulgaria swapped $1.3 billion of Brady Bonds for eurobonds, an operation that also resulted in a small reduction in external debt. The international *credit ratings* of many transition economies improved in 2000-2001,[78] but there has been little further change in 2002. However, Kazakhstan reached a major milestone in September 2002 when Moody's upgraded the country by two notches to investment grade (Baa3), the first CIS country to be so rated.[79] Currently 10 transition economies (mostly candidates for EU accession) are rated investment grade risks and eight are

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[76] The Russian stock market was one of the best performing in the world in the first half of the year.

[77] Ukraine was able to obtain some medium and long-term credits and FDI in the first half of 2002.

[78] UNECE, *Economic Survey of Europe, 2002 No. 1*, table 3.5.14.

[79] In addition to larger oil exports expected in the medium term (due to the construction of a new oil pipeline), Moody's cited key accomplishments such as the creation of an oil stabilization fund, a stable banking sector with a deposit insurance scheme and the implementation of a pension scheme, as justification for the upgrade.

TABLE 1.2.13

Foreign direct investment in eastern Europe, the Baltic states and the CIS, 2001-2002

(Million dollars, per cent)

	FDI inflows[a] *(million dollars)*			*Net FDI/current account*[b] *(per cent)*		
		Jan.-Jun.			*Jan.-Jun.*	
	2001	*2001*	*2002*	*2001*	*2001*	*2002*
Eastern Europe	20 576	9 653	10 441	107	77	86
Albania	207	101	50*	95	92	25
Bosnia and Herzegovina	130	61*	110*	13	16	28
Bulgaria	694	380	229	81	96	60
Croatia	1 447	469	554	206	30	34
Czech Republic	4 916	2 526	5 385	184	197	538
Hungary[c]	2 443	1 470	612	190	127	32
Poland (cash basis)	6 995	2 823	1 872	97	63	47
Romania	1 157	415	525	51	33	53
Slovakia	1 475	714	271	83	84	30
Slovenia	503	258	633	..	602	..
The former Yugoslav Republic of Macedonia	443	385	20	136	219	11
Yugoslavia	165	53*	180*	26	9	20
Baltic states	1 165	684	847	58	103	76
Estonia	542	281	181	101	166	31
Latvia	177	132	247	23	64	95
Lithuania	446	270	419	76	104	107
CIS	6 914	3 458	2 574	..	..	..
Armenia	70	47	..	36	52	..
Azerbaijan	227	-7	358*	437	..	102
Belarus	104	31	60	37	..	..
Georgia	110	51	..	52	45	..
Kazakhstan	2 760	1 407	332*	158	269	55
Kyrgyzstan	25	2	22	125	..	220
Republic of Moldova	149	111	25	149	329	55
Russian Federation	2 469	1 188	1 263	..	..	..
Tajikistan	9	6	12*	6	7	12
Turkmenistan	..	..	..	..	..	..
Ukraine	792	540	237	..	..	..
Uzbekistan	70	17	..	..	..	..
Total above	28 655	13 795	13 862	..	..	..
Memorandum items:						
CETE-5	16 333	7 790	8 773	124	98	117
SETE-7	4 243	1 863	1 668	69	42	35
Asian CIS	3 400	1 588	989	129	164	72
Three European CIS	1 044	682	322	..	..	..

Source: UNECE secretariat, based on national balance of payments statistics; IMF, *Staff Country Reports* (Washington, D.C.), for Bosnia and Herzegovina, Yugoslavia, Tajikistan and Uzbekistan (www.imf.org); TACIS, *Azerbaijan Economic Trends* (Baku), for Azerbaijan (www.economic-trends.org).

Note: Estimates for Bosnia and Herzegovina, Tajikistan and Yugoslavia are one half of the corresponding IMF projections for the full year. Estimates for Azerbaijan, Kazakhstan and Kyrgyzstan are twice the first quarter 2002 results. Turkmenistan no longer publishes balance of payment data.

[a] Inflows into the reporting countries.

[b] In this table (..) indicates that the current account balance was positive (and/or net FDI negative).

[c] Excludes reinvested profits (a credit). See text.

rated sub-investment grade.[80] During the summer of 2002, a period of mounting concern about the political direction of Brazil, spreads on the bonds of several transition economies, rated as sub-investment grade, widened temporarily. However, investment grade bonds seemed to have been hardly affected.[81]

Despite the generally unfavourable international climate for *FDI*,[82] inflows into eastern Europe and the Baltic states increased moderately in the first half of 2002 (table 1.2.13). The dominant transaction involved the €4 billion privatization of Transgas, the Czech natural gas monopoly. Other large privatization deals have been completed, or are planned, in the second half of 2002. Foremost among them is the sale of SPP, the Slovak natural gas monopoly, for $2.7 billion.[83] The 2002 budgets of the Czech Republic, Hungary, Poland and Slovakia foresaw combined revenues of some $12 billion from the sale of property, but except for Slovakia, the privatization proceeds so far are below the original plans, most notably in the case of Poland.[84] In many CIS countries the persisting perception of a poor investment climate appears to have deterred foreign investment,[85] despite several consecutive years of economic growth.

On average, net FDI inflows in 2000-2001 exceeded the current account deficits of the east European countries (table 1.2.13), suggesting a relatively low vulnerability of current account financing to potential disruptions in the capital markets. In the first half of 2002, the results so far have been influenced by the large FDI flows into the Czech Republic, but there are several countries where FDI has financed only a relatively small share of the current account deficit. However, privatizations in the second half of 2002 should improve the proportion in several countries, as has already occurred in Slovakia.

1.3 The short-term outlook

Global recovery has become increasingly fragile

At the beginning of the final quarter of 2002, the economic situation in the world economy was looking increasingly fragile. Growth forecasts for 2002 and 2003 were markedly down in the third quarter of 2002 against a backdrop of only modest rates of economic growth, after the rebound in activity in the first quarter of the year and the sharp fall in equity values. Earlier expectations, that economic activity was set to strengthen in the second half of the year, have been disappointed. The consensus of forecasters is now that the recovery has been postponed until the second half of 2003. But this appears to be merely a mechanical rescheduling of the upswing, which ignores the restraints on growth and the considerable downside risks associated with the persistent imbalances in the global economy. Whether these will be overcome without severe disruption is one of the major sources of uncertainty.

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[80] Ibid.

[81] For example, the spread on Poland's $400 million add-on bond in September (150 basis points over treasury bills) was lower than that on the initial $1 billion offering in June (158 basis points).

[82] The IIF has estimated that net direct investment in the emerging markets will fall in 2002, which is attributed to the weak global economy, concerns about prospects for profitability, limited privatizations and perceptions of a greater risk associated with investing in emerging markets. IIF, op. cit.

[83] The receipts from this sale were received in July, boosting official reserves from $4.3 billion to $7.1 billion.

[84] JPMorgan, *Emerging Europe, Middle East and Africa Weekly* (London), 27 September 2002. Poland is likely to collect only about one third of the budgeted amount.

[85] According to various estimates, Azerbaijan and Kazakhstan, two important oil producers, are expected to attract FDI inflows of $1.3 billion and $2-$2.5 billion, respectively, in 2002 as a whole.

World output is now forecast to increase by some 2.75 per cent in 2002, up from 2.2 per cent in 2001. A moderate strengthening of the cyclical momentum is then expected to result in an average growth rate of world output of some 3.5 per cent in 2003.[86]

(i) Western Europe and North America

2003 growth forecasts for North America and western Europe have been cut

In the United States, real GDP is now forecast to increase by somewhat less than 2.5 per cent in 2002 as a whole. The expected outcome for 2003 is only slightly better at 2.6 per cent (table 1.3.1), but nearly 1 percentage point less than forecast in the spring of 2002.

Although activity in the third quarter of 2002 was supported by special financing incentives offered for car purchases, the ending of these can be expected to be reflected in weaker spending in the final quarter. Consumer confidence fell sharply in early October, adding to the general uncertainty about the future direction of economic activity. Falling equity prices have more than offset the continued rise in house prices, leading to a considerable decline in the ratio of households' net worth to disposable income by more than one third from its peak in the second half of the 1990s. At the same time, the household debt-servicing burden remains at a high level. The combined impact of these two factors will be to dampen household's spending propensity in 2003 and possibly beyond, but uncertainty surrounds the magnitude and timing of the adjustment to their savings that households judge desirable or necessary in view of the deterioration of their financial balance sheets. The outlook for business investment is also uncertain in the face of high corporate debt levels, weak profits growth and large margins of excess capacity, especially in the ICT sector. The depreciation of the dollar, especially if it continues in 2003, however, should help to support real net export growth.

Overall economic activity will continue to be supported by low interest rates. Expectations are that monetary policy will be eased further in the event of prolonged economic weakness. But the economic stimulus provided by a further easing of monetary policy may be reduced in an environment dominated by high levels of debt and considerable underutilization of production capacities.

TABLE 1.3.1

Real GDP in western Europe, North America and Japan, 2001-2003
(Percentage change over previous year)

	2001	*2002*	*2003*
France	1.8	1.0	2.0
Germany	0.6	0.4	1.4
Italy	1.8	0.5	1.8
Austria	1.0	0.9	2.4
Belgium	1.0	0.7	2.1
Finland	0.7	1.0	2.9
Greece	4.1	3.1	3.6
Ireland	5.9	3.5	4.5
Luxembourg	3.5	2.9	5.2
Netherlands	1.3	0.4	1.7
Portugal	1.7	1.0	1.5
Spain	2.8	1.9	2.5
Euro area	1.5	0.9	1.9
United Kingdom	1.9	1.5	2.4
Denmark	1.0	1.5	2.3
Sweden	1.2	1.8	2.7
European Union	1.5	1.0	2.0
Cyprus	4.0	2.1	4.0
Iceland	1.5	-0.6	3.0
Israel	-0.5	-1.1	1.8
Malta	-0.3	2.0	4.9
Norway	1.4	1.4	1.8
Switzerland	0.9	-0.1	1.3
Turkey	-7.4	3.9	5.0
Western Europe	1.2	1.2	2.4
Canada	1.5	3.4	3.4
United States	0.3	2.4	2.6
North America	0.4	2.5	2.7
Japan	-0.5	-0.8	1.0
Total above	0.6	1.5	2.3

Source: National statistics; Consensus Economics, Inc., *Consensus Forecasts* (London), September 2002; IMF, *World Economic Outlook* (Washington, D.C.), September, 2002 (www.imf.org).

In the euro area, real GDP is now forecast to increase at best, by 1 per cent in 2002, about a quarter of a percentage point less than was expected in the spring of 2002. This mainly reflects the persistent weakness of domestic demand, which is being accentuated by the negative wealth effects of the sharp drop in share prices. Export growth has also been less than expected as a result of the faltering of the global recovery after the first quarter of 2002. In virtually all of the 12 current member states of the euro area, annual growth rates of real GDP for 2002 will be lower than in 2001 (table 1.3.1). A major factor restraining growth in the euro area (and western Europe at large) remains the sluggishness of the German economy, where real GDP is forecast to increase by only 0.5 per cent in 2002, partly reflecting the disruption caused by the floods.

On the basis of an expected strengthening of the international business cycle, led by the United States, the rate of economic growth in the euro area is also forecast to pick up in the course of 2003. The general transmission mechanism is for a strengthening of exports to lead to higher activity levels which, in combination with low interest rates, should stimulate business investment. In addition, households' real disposable incomes will be supported by the forecast decline in inflation, although this will be offset to some extent by reduced erosion of household debt levels in real terms. But the pick up of exports may be dampened by the appreciation of the euro which, together with the general, albeit moderate, upturn in domestic demand will also stimulate import demand. Changes in real net exports are therefore likely to be broadly neutral in their effect on overall economic activity in 2003. The consensus of forecasters is currently for an increase in real GDP of only some 2 per cent in the euro area in 2003. The expected outcome is broadly the same for the European Union and western Europe as a whole (table 1.3.1). Such a modest rate of output growth is unlikely to lead to any improvement in the labour market situation in 2003.

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[86] IMF, *World Economic Outlook* (Washington, D.C.), September 2002 (www.imf.org).

Subdued economic outlook calls for a more supportive policy mix

The subdued rate of economic expansion in the euro area and the widening of the output gap in 2002, which is likely to increase in 2003, will tend to further lower inflation, which is forecast to fall below the ECB's very ambitious ceiling of 2 per cent in 2003. The current economic outlook calls for a more expansionary stance of monetary policy, not least to better offset the dampening economic effects of the appreciation of the euro and the fall in equity values. The change in economic circumstances in the euro area in the course of 2002 has once again highlighted the rigid rules of the Stability and Growth Pact, and the dilemma that arises when the "rosy economic scenarios" underlying political commitments to budgetary consolidation are confronted with unexpected, adverse economic shocks. The intended revision of the Stability and Growth Pact in the euro area needs to provide a more conducive framework for the operation of the automatic stabilizers in the event of a cyclical slowdown by putting the focus of fiscal discipline on structural budget deficits and levels of government debt.[87] But the basic problem now facing the three large economies is how to get to a balanced budget position in the first place without being forced to adopt a procyclical policy stance.

Significant downside risks remain

The short-term economic outlook is anyway subject to a number of important downside risks and uncertainties, which are partly the legacy of the boom years in the United States in the second half of the 1990s. The high levels of debt accumulated in the United States private sector during the second half of the 1990s will have to be reduced sooner or later. The sharp fall in equity values has accentuated the need for this adjustment process, *inter alia,* because the significant loss of net worth means that further borrowing will be difficult to obtain. In view of the deteriorating net worth position and weak labour markets, households may be compelled to make a larger increase in their savings than is currently assumed by forecasters, with concomitant adverse effects on consumer demand, business profits and fixed investment. This would risk triggering a vicious circle, with renewed selling pressure on international equity markets leading to a further deterioration in the balance sheets of households, the corporate sector and financial institutions in the major industrialized countries. Another question is to what extent business investment will be limited because of the necessity to make provisions for their pension fund obligations, which are now insufficiently covered as a result of the sharp decline in equity markets. There are similar concerns in some west European economies, where private sector balance sheets, including those of financial institutions, have also been weakened by the collapse of share prices.

There are, moreover, persistent concerns about the financing of the United States current account deficit (which is simply the mirror image of the excess of spending over incomes in the private sector and the newly emerged government budget deficit) and which is projected to remain very high in 2003. Much will depend on the confidence of foreign investors as to whether the United States corporate sector will be able to generate the relatively high rates of return of recent years. That confidence may have been weakened by the series of corporate financial scandals and the more uncertain prospects for short-term growth. As noted earlier,[88] a sudden reversal of capital flows would trigger a sharp depreciation of the dollar (apart from the likely adverse effects on equity markets), which would shift United States domestic demand away from foreign goods to domestic products. Such a decline of the dollar would be mirrored by a corresponding appreciation of the euro which, via adverse changes in real net exports, would significantly dampen economic growth in the euro area, with adverse spillover effects to the rest of Europe and beyond.

The bad loans problem of the banks in Japan remains severe and, moreover, a priority concern for international financial stability. Also, the upward pressure on the oil price associated with a potential military conflict in Iraq, is likely to have adverse effects on purchasing power in the oil importing countries, apart from the depressing effects on business and consumer confidence.

Moreover, inflation, at the global level has fallen to relatively low levels, reflecting on the one hand the credibility of central banks in shaping inflationary expectations, but mainly the significant growth in potential supply capacities in recent years, which has tended to outpace demand.[89] This expansion reflects technological advances, but also increased capacity in some emerging markets such as China and the Republic of Korea, which has led to intensified price competition. This must be viewed in the light of the considerable overinvestment in sectors such as ICT, automobiles and steel, as well as the persistent weakness of domestic demand in large parts of the global economy, including western Europe and Japan. The associated (albeit moderate) deflationary tendencies will be strengthened by the collapse of financial asset prices since the first quarter of 2000 and they risk being accentuated by the prolonged weakness of economic activity in the United States, which has been the major importer of last resort for the global economy over the last few years. This constellation of factors constitutes a major policy challenge, given that interest rates are already very low in the United States, and that in a context of low and falling inflation, the room for manoeuvre of monetary policy is narrowly circumscribed. This points to the complementary role of fiscal policy in stimulating economic activity.

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[87] UNECE, *Economic Survey of Europe, 2002 No. 1*, pp. 7-10.

[88] Ibid., p. 6.

[89] BIS, *72nd Annual Report* (Basel), 8 July 2002, p. 143.

In view of the domestic and external imbalances in the United States economy, there is a need for a switch in an acceleration of expenditure from foreign goods to domestic goods and for export growth via improved price competitiveness. Any domestic demand-led recovery in the United States would risk being short-lived because of the adverse implications for the external deficit and increased risk that foreign investors would be unwilling to continue financing it. The longer the external adjustment is delayed the greater the possibility of disruptive changes in capital flows.

For the inevitable adjustment process in the United States to occur more or less smoothly, a more conducive environment of domestic demand growth is required in the rest of the world, and especially in western Europe. This can certainly be helped by policies aimed at product market deregulation and labour market reforms designed to stimulate job creation.[90] But it will also require a reconsideration of the macroeconomic policy framework in the euro area in order to achieve a better coordination between fiscal and monetary policy.[91] More generally, the low inflation target pursued by the ECB, in combination with the procyclical policies triggered by the rules of the Stability and Growth Pact, introduce a deflationary bias to economic policy which is particularly dangerous in the present economic context.

(ii) Eastern Europe, Baltic states and the CIS

A stronger external impetus is needed to sustain a high rate of economic expansion

The uncertainties surrounding the global economic outlook and the weak economic performance of western Europe cast a shadow over the short-term prospects for the east European economies and the CIS. Most of these economies rely on exports to support their economic growth and hence, a state of prolonged weakness in the economies of their main trading partners is hardly a conducive environment for sustaining their growth. The transition economies have so far avoided the immediate effects of the global economic downturn largely due to the continuing recovery in their domestic demand, which has underpinned the relatively high level of economic activity in the first half of 2002. However, it is unlikely that these economies will be able to escape for long the negative effects of a protracted weakness in the global and west European economies. At present this appears to be the most serious risk for the eastern European and Baltic economies. Moreover, a number of countries in the region have chronically large current account deficits, which rule out an extended reliance on domestic demand as an alternative source of growth. As for the commodity exporting CIS countries, their short-term prospects have improved somewhat due to the U-turn in some commodity prices (particularly oil and gold) in the course of 2002.

Overall, the performance of the transition economies in the first six months of 2002 and, especially, the acceleration of growth in some countries in the second quarter, suggest on average a favourable outcome in 2002. In fact, despite the moderation of growth since 2001, the transition economies as a whole are likely to remain among the fastest growing regions in the world in 2002. Given the considerable uncertainties, however, more caution is needed with regard to the outlook for 2003.[92] In terms of the envisaged rates of GDP growth (table 1.2.1) some of these forecasts appear to be quite optimistic so their realization will probably be conditional on a speedy reversal of the current negative trends in the global economy.

According to the forecasts available at the time of writing this *Survey*, aggregate GDP in the transition economies as a whole is expected to increase by some 3¾ per cent in 2002 and some 4 per cent in 2003. With average rates of GDP growth of 5 per cent in 2002 and 5¼ per cent in 2003, the Baltic states are expected to be the fastest growing subregion in the short run. GDP growth is expected to remain strong in all three Baltic states with rates of some 5-5.5 per cent in 2003. Aggregate GDP in the CIS is forecast to increase by 4½ per cent in 2002 and by slightly less, 4¼ per cent, in 2003. The average rate of GDP growth in eastern Europe – which is heavily influenced by Poland – is expected to be 2½ per cent in 2002, improving to 3¾ per cent in 2003.

In general, growth in the central European transition economies is likely to be moderate, as these countries are the most affected by economic weakness in western

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[90] See Part Two of this *Survey*.

[91] UNECE, *Economic Survey of Europe, 2002 No. 1*, pp. 7-10.

[92] At the time of writing this *Survey*, the budgetary process for 2003 was still underway in most of the transition economies and so governments were still adjusting their targets for the coming year. As a result, in a number of transition economies no official growth forecasts for 2003 were available; in these cases UNECE secretariat estimates are included in table 1.2.1.

Europe due to their strong dependence on trade with the latter. According to the official forecasts, however, all of these economies expect an acceleration of growth in 2003. The most substantial upturn – after two years of sluggish output – is forecast in Poland. When debating the outline of the budget for 2003, the Polish government raised its GDP growth forecast to 3.5 per cent from 3.1 per cent.[93] The central bank, as well as most independent analysts, has criticized this revision as unrealistic.[94] There have also been accusations that this change is a move which, at least on paper, would increase tax revenue in the 2003 budget, thus narrowing the projected fiscal shortfall. In any case, despite the debates over the exact numbers, there is a general expectation that Poland's economic performance in 2003 will be considerably better than in the previous two years. The severe August floods have had a negative impact on economic activity in the Czech Republic and, compared with the figure at the beginning of the year, the official forecast of GDP growth in 2002 has been lowered by 1 percentage point, to a range of 1.5 to 2.5 per cent. However, most analysts believe that reconstruction and renewal work will have a positive effect on Czech economic performance in 2003 and thus to an acceleration of growth. In Hungary, it is widely expected that by next year the present economic slowdown will have come to an end and that GDP growth will pick up to reach some 4 per cent in 2003. A similar acceleration of growth in 2003 is envisaged in Slovakia and Slovenia. These forecasts, however, assume a substantial improvement in the export performance of these economies; in addition it should be noted that both Hungary and Slovakia are facing fiscal restraints, which have a negative effect on output in the short run.

Recently there has been increased dynamism in the economic performance of some of the south-east European transition economies and this is expected to continue in the short run. Thus, Bulgaria and Romania expect rates of GDP growth of more than 4 per cent in both 2002 and 2003, partly reflecting their recent policy prudence and progress towards macroeconomic stability. Relatively strong growth is also expected to continue in Croatia; however, as it has so far been predominantly fuelled by domestic demand, the sources for a further acceleration are limited. The short-term outlook in The former Yugoslav Republic of Macedonia is somewhat less favourable. The post-conflict recovery in 2002 has been rather sluggish and it is still not clear whether GDP for the year as a whole will actually increase at all; nor is any substantial improvement expected in 2003. The Yugoslav economy is undergoing a fundamental restructuring and the difficult reform agenda will continue to have a negative effect on economic activity in the short run.

Despite some moderation, it is widely expected that the pace of growth will remain relatively high in most of the CIS countries in the short run. At the start of 2002, there was a marked slowdown in the Russian economy but recently there have been signs that this is coming to an end: since the second quarter economic activity has been picking up, especially in manufacturing and services. Russia's growth continues to be predominantly led by the ongoing recovery in domestic demand (in the first place private consumption), but the upturn in world oil prices in 2002 has also been highly beneficial for the economy.[95] Thanks to the recent strengthening of output, the growth of Russia's GDP in 2002 as a whole is likely to reach 4 per cent or even more, very much in line with the official forecasts at the beginning of the year. Russia's draft budget for 2003 envisages GDP growth in the range of 3.5-4.4 per cent, under conservative assumptions about oil prices.[96] If world oil prices remain at their present high levels, the Russian economy is likely to grow even faster next year.

Rapid economic expansion is expected to continue into 2003 in two of the other oil-exporting countries – Azerbaijan and Kazakhstan – although their forecast rates of GDP growth (7.5 and 6 per cent, respectively) are somewhat lower than those in 2000-2002. Both countries have benefited from large inflows of FDI in the energy related sectors of the economy, and these sectors will continue to be the main engines of growth thanks to increased production and export capacities. During the first half of 2002, Ukraine's economic performance was below expectations and this has prompted the authorities to lower their forecasts of GDP growth for the year as a whole by 1 percentage point, to some 5 per cent, but even this may be difficult to attain. The official forecasts for next year have been lowered several times, and the draft budget for 2003 is based on a conservative assumption of 4 per cent growth of GDP. According to Ukraine's central bank, GDP growth next year may be higher, reaching some 4.5-4.8 per cent.[97] The upturn of economic activity in Belarus in the second quarter of the year has increased the government's confidence in its earlier forecast of GDP growth of more than 6 per cent in 2002.[98] However, as in the case of Ukraine, this may turn out to be overambitious. The official forecast for GDP growth in 2003 (7 per cent, according to the central bank) also appears to be somewhat optimistic. Most of the other CIS economies expect current trends to continue into 2003.

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[93] *Reuters News*, 9 September 2002, reported in *Dow Jones Reuters Business Interactive* (Factiva).

[94] Most independent analysts, as well as the central bank's Monetary Policy Council, expect Poland's GDP to grow by some 2.5-3 per cent in 2003.

[95] For more details on the impact of oil prices on Russian economic performance see UNECE, *Economic Survey of Europe, 2001 No. 1*, pp. 69-74.

[96] The forecasts for 2003 are based on the assumption that Urals oil will be priced between $18.5 and $21.5 per barrel, which is considerably below its price in September 2002. Interfax International, *Daily Business Report*, 11 September 2002, reported in *Dow Jones Reuters Business Interactive* (Factiva).

[97] *Reuters News*, 11 September 2002, reported in *Dow Jones Reuters Business Interactive* (Factiva).

[98] *Reuters News*, 9 August 2002, reported in *Dow Jones Reuters Business Interactive* (Factiva).

PART TWO

LABOUR MARKET CHALLENGES IN THE ECE REGION

PAPERS FROM THE ECE SPRING SEMINAR, MAY 2002

INTRODUCTION AND SUMMARY OF DISCUSSION

Economic Analysis Division, UNECE

The UNECE's fifth Spring Seminar was held in Geneva on 6 May 2002 and was devoted to *Labour Market Challenges in the ECE Region*. This is evidently a vast subject and for ECE it comprises developments in both the established market economies and those which have embarked on the transition to functioning market economies, a process which for many of them is now largely completed.

In western Europe, high levels of unemployment are a relatively recent phenomenon and there is a long list of factors, such as a lack of sufficient labour market flexibility, overly generous social welfare provisions, excessive product market regulations, failures in the education system, supply-side shocks, changes in the external environment and macroeconomic policies, which are thought to have contributed to its persistence, although their relative importance is difficult to gauge.

With the onset of the transition towards market-driven economic systems, the former centrally planned economies have also been confronted with the emergence of high and rising levels of open unemployment. Unemployment was absent under the former communist systems, although in its place there were considerable pockets of hidden unemployment (or underemployment) and an inefficient allocation of production factors. The emergence of significant open unemployment was therefore not unexpected, given that these economies had to adjust to a competitive environment at home and abroad, which required and triggered a considerable amount of structural change. At the end of a decade of difficult reforms, these economies are still suffering from the initial shock of the sharp decline in output (the transformational recession) and the difficulties of adjusting to the change in economic regime.

In view of the extent and scale of labour market problems, searching for ways and means to lower unemployment and raise levels of employment and labour force participation rates is a major preoccupation of policy makers throughout the ECE region. Concern focuses not only on the elimination of economic waste and the reduction of social costs but also on the sustainability of social protections systems, notably pension schemes.

The Seminar opened with a paper by **Richard Jackman** (London School of Economics and Political Science) on "Unemployment in western Europe". Jackman emphasized that historically until the 1970s, Europe enjoyed a lower unemployment rate than the United States, but that there is a significant variation in labour market performance across countries. In other words, western Europe cannot be treated as a homogeneous entity, either with regard to labour market institutions and policies, which affect labour market outcomes, or to actual performance.

Jackman focuses his analysis on changes in employment, rather than on unemployment. He argues that the traditional standardized unemployment rate (based on the ILO definition) used for international comparisons is an imperfect indicator of labour market performance because it does not distinguish between voluntary and involuntary unemployment. Nor does it take into account the "discouraged worker" effect, which Jackman believes to have a large structural component. The implication is that non-participation in the labour force reflects to a large degree a kind of "hidden unemployment". Measures such as the employment-population ratio (employment as a per cent of the total population of working age) and the labour force participation rate (labour force as a per cent of total working-age population) therefore provide a more comprehensive picture of the relative labour market developments.[99]

These two measures still show labour market performance in the United States to have been better than the average of western European countries, but again there is considerable variation among the European countries. A noteworthy feature is that the pervasive rise in labour force participation rates over the past four decades reflects mainly a considerable increase in female participation, which contrasts with a tendency of the male participation rate to decline. Interestingly, the increased relative supply of female labour was not reflected in a decline of their relative wage, thus reflecting, *inter alia,* a shift in the composition of the demand for labour towards activities (services, public sector) where women have a comparative advantage.

About three quarters of the cross-country variation in the employment-population ratio can be explained by variations in the participation rate and only about a quarter is due to variation in the unemployment rate. These differences largely reflect variations of the female participation rate across countries, but there are also strikingly large differences in the employment-population ratio for young persons (aged less than 25) and older persons (aged over 55). This contrasts with relatively little cross-country variation in the employment-population ratio, and participation and unemployment rates of prime-age male workers (age 25-54).

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[99] Note that the employment-population ratio (E/P) is the product of the employment rate (E/L) and the labour force participation rate (L/P), i.e. $E/P=E/L * L/P$, where E denotes employment, P the population at working age and L the labour force.

For Jackman, the large differences in the employment-population ratio for these three groups of persons indicate problems on the side of labour demand. With regard to young persons he singles out non-wage labour costs and institutional rigidities, such as minimum wages, which have an adverse impact especially in France and Italy. In a similar vein, the low proportion of older persons in the labour force of many countries is attributed to pension schemes that create incentives for early retirement. Also, the large variation in female participation rates is seen to mainly reflect cross-country differences in labour market institutions that either restrain or encourage the demand for female workers.

In line with these observations, the pronounced negative correlation between participation and unemployment rates across countries, i.e. the fact that low participation rates tend to be associated with high unemployment rates, is interpreted as a “discouraged worker” effect. The conclusion is that low employment and participation are largely the result of a shortage of jobs rather than a reflection of individual preferences not to work or a deficiency of aggregate demand for goods and services in the economy.

For Jackman, the policy implication is that there is a need to raise the willingness of employers to create more jobs. The relevant variables influencing this decision include wage and non-wage labour costs, wage bargaining schemes, and taxes and regulations. For example, Jackman points to evidence that, lower start-up costs for businesses tend to go hand-in-hand with a higher employment-population ratio. More generally, intercountry differences in labour market performance are associated with differences in their labour market institutions. In the presence of common technological, demographic and social shocks, the individual west European countries have demonstrated different capabilities of adjusting their labour market institutions to respond to changing economic circumstances in order to support the creation of new jobs rather than focussing on the protection of existing ones. What remains to be explained, however, is the political economy of these marked differences in “institutional hysteresis”.

Jackman gives a rather negative assessment of labour market supply-side measures (notably active labour market policies) to increase the willingness and capacity of workers to take on a new job. He argues that in the presence of job shortages, these measures may not be very effective. Supply-side policies are seen to be merely complementary to measures operating on the demand side, aimed at preventing workers from opting out of the labour market.

The two discussants of Jackman’s paper were in broad agreement with his analysis and conclusions although there were nuances. **Jørgen Elmeskov** (OECD) noted that instead of the number of persons employed it would have been preferable to look at hours worked as a gauge of labour market performance. He also disagreed, moreover, with Jackman’s negative assessment of Active Labour Market Policies, the effectiveness of which had been proven in many instances, especially when well targeted. He also missed a discussion of the role of tax systems on labour market performance and of the impact of product market competition on demand for labour. Elmeskov also qualified Jackman’s emphasis on demand-side policies somewhat, pointing to the pervasive incentives to early retirement and the close relation between unemployment rates and participation rates of older workers. He noted that the considerable cross-country variation in the participation rates of older persons could not be explained mainly by demand factors. He emphasized that existing early retirement policies will become unsustainable in view of the progressive ageing of European populations.

The other discussant, **Juan Jimeno** (Universidad de Alcalá de Henares), suggested that the negative correlation between unemployment and participation rates in western Europe reflected the fact that exit from the labour market was acting as a buffer to labour demand shocks. This stands in sharp relief to the United States, where the adjustment to region-specific shocks occurs via labour mobility. He agreed that the large variation in the labour market performance of the various west European countries cannot be explained without reference to differences in national labour market institutions in the areas of wage setting, employment protection, active labour market polices, education systems, etc.

While national labour market institutions appear to have been quite adequate during the “golden age” period of the “European Welfare State”, i.e. the 1950s and 1960s, in many countries they are no longer capable of coping with the profound changes in the socio-economic environment that have since taken place. Instead, they now tend to reduce efficiency while at the same time failing to contribute to social equity. This reflects the political economy of labour market adjustment, which tends to protect insiders, mainly adult male heads of households. There were, however, notable exceptions among the smaller economies (Austria, Denmark, Ireland, the Netherlands, Sweden), which have long traditions of cooperative labour relations and which have been able to design appropriate policies to respond to these new challenges. The Dutch Wassenar agreement is often taken as a model in this respect.

There were a number of comments from the floor disagreeing with Jackman’s advocacy of demand-side policies. The implied deregulation to achieve more labour market flexibility was seen as leading to social exclusion and the proliferation of low quality, poorly paid jobs. The

United States was mentioned as an example of this. Doubts were also expressed as to whether the United States model was one for western Europe to emulate. It was also argued that the paper could have discussed more extensively the role of structural change (and the related technological developments), which was the underlying rationale of the EU employment strategy. It was also pointed out that the large variation in unemployment rates across the region concealed in general a similarly large variation of regional unemployment within countries. In this context the regional cross-border dimensions of labour market performance were stressed, i.e. the fact that cross-border regional economic linkages between firms tend to be associated with similar good (or bad) labour market performance on both sides of the border. An example is provided by the regions bordering on Switzerland, which also tend to have low rates of unemployment.

Responding to the various questions and comments, Professor Jackman acknowledged that the measure of "hours worked" was an important one but suggested that most of the variation in hours worked across countries reflects the voluntary choices of labour market participants in part-time work. Comparisons of hours worked do not therefore necessarily allow drawing conclusions about the state of the labour market in different countries. He also noted that the capacity to use top-down social policies for achieving desirable labour market outcomes seems to be limited to smaller countries. Larger countries therefore opt for deregulation, not because it works better than the top-down approach but because it is the only policy that appears to be feasible.

In the second session, **Alena Nesporova** (ILO) discussed the main features of labour market developments in the transition economies. The process of creating functioning market economies is now nearly complete in many of them, especially those which are official candidates for EU membership. But the deep transitional recession and the economic adjustment processes have led to falling employment levels in all countries. In many countries, the recent recovery of output growth has been accompanied by further labour shedding, reflecting the persistence of excess labour in a number of industries and improvements in productivity.

Labour force participation rates have fallen sharply and to very low levels. Male participation rates have tended to fall more than those of females. There is conflicting statistical evidence on unemployment by gender: data for the *registered* unemployed show a higher proportion of females as unemployed, while labour force surveys show the reverse. Long-term unemployment has risen markedly, accounting for some 40 per cent of the total number of persons unemployed in most countries in 2000/2001. These are often low-skilled workers in the higher age groups, often with health problems and not very mobile. Another major concern is the high level of youth unemployment despite a pronounced fall in the labour force participation rate of younger persons. The incidence of unemployment tends to decline with age, a fact that Nesporova attributes to insider power, seniority rules and early retirement schemes.

A striking feature is that despite a much sharper decline in output, the fall in employment and the rise in unemployment in the CIS, on average, was much less pronounced than in central Europe. Although there are problems with the comparability and reliability of the statistics, this appears to reflect the impact of institutional factors (see below).

Nesporova notes that the persistence of unemployment in the face of recovering output levels in the transition economies suggests the increasing importance of structural impediments to job creation. This is also reflected in the considerable regional disparities of unemployment within individual countries. This geographical mismatch between demand and supply of labour is accentuated by inadequate transport and the lack of well-functioning housing markets. In addition, there is also an important mismatch between the available supply and the demand for specific skills.

Nesporova points out that the official labour market statistics mask the emergence of an often quite large informal sector in the various countries. This reflects the efforts of the self-employed to avoid paying taxes and of the unemployed to compensate for their loss of income in the presence of weak social welfare schemes.

The differential labour market performance of individual economies during the first decade of transition reflects a host of factors such as the initial conditions, the speed and consistency of institutional reforms, the geographical proximity to western European markets, existing trade contacts with western firms, partly preserved industrial and entrepreneurial traditions during the period of central planning, as well as macroeconomic imbalances and policies to redress them.

Privatization of state owned enterprises had a predominantly negative impact on employment, given the need for restructuring and elimination of excess labour. FDI contributed to job creation and job preservation (also via links with domestic suppliers) but rationalization and competitive pressures on domestic firms also led to labour shedding, so the net effect is difficult to gauge.

The creation of new firms (small and medium-sized enterprises) has been an important source of new job creation, but the overall impact has been circumscribed by factors such as the macroeconomic environment and the difficulties of gaining access to financing.

The central and eastern European countries have introduced active labour market policies to support new job creation and the reintegration of the unemployed in the labour market. But the available funds for such measures have been rather limited as the bulk of expenditures have been absorbed by entitlements to unemployment benefits.

Nesporova notes that whereas in the central and eastern European countries the responsibility for supporting redundant workers has been shifted from enterprises to the public employment services (PES), this is not in general the case for the CIS. In the CIS, employment protection still largely resides within enterprises, a consequence of protective legislation and the low levels of assistance provided by the PES. This has led firms to develop alternative adjustment mechanisms such as short-term working, administrative leave and delayed wage payments. Overall, this kind of disguised unemployment is seen as a way of avoiding social unrest, but the question is how sustainable these measures are.

Looking ahead, Nesporova points to the need to include employment growth (and high employment levels) among the macroeconomic policy objectives. This requires, *inter alia,* a conducive environment for business investment and for the creation of small and medium-sized enterprises and the need for public investment to improve the physical infrastructure (transport and communications). It is also important to level the playing field for domestic and foreign firms, to improve investment in human capital for new entrants into the labour market, and to upgrade the skills of the existing workforce. She also emphasized the need to involve social partners (trade unions, employers' organizations) in the design of economic and social policies to stimulate job creation.

The first discussant, **Gábor Kőrösi** (Hungarian Academy of Sciences), agreed with the main thrust of Nesporova's paper. He noted that the major problem in the transition economies is the low employment ratio rather than high unemployment. The low employment rate may be largely structural, reflecting a combination of skill and geographical mismatches between labour supply and demand. These two factors affect both male and female workers, i.e. they are not gender specific.

It is often argued that the labour force in the transition economies, on average, has a high level of education, endowing these countries with a good stock of human capital to develop new comparative advantages. Kőrösi was quite critical of the legacy of the education and training system of the former communist system. He argued that it provided workers with skills (particularly workers in the lower skill groups) that are often inadequate in the new economic environment. The median school leaver did not have adequate basic literacy skills and the percentage of workers with poor literacy skills is much higher than the OECD average. This has become a major source of structural unemployment, given that the demand for such workers is lacking, especially among foreign firms that employ modern production technologies.

Although tertiary education has been expanded, it is facing significant resource constraints that, in turn, are likely to have adverse effects on the general skill level of graduates with the risk of "creating an inflation of educational attainment without much substance".

Another major problem identified by Kőrösi is the sharp fall in employment in rural areas, which have suffered considerably from the collapse of demand for low-skilled workers in the former industrial centres. Prospects for work going to the villages are bleak, while labour mobility is impeded by the shortage of housing, and by high rents and transport costs, which affect notably older persons. Rural job creation by domestic entrepreneurs has remained limited, leaving aside the fact that the overall degree of business literacy is still low.

The other discussant, **Iskra Beleva** (Bulgarian Academy of Sciences), agreed with Kőrösi's analysis of the education systems noting that it was time to revise the view that the transition economies have the advantage of a cheap and well-educated workforce, pointing to indicators such as the number of children with primary educational level and the expansion of illiteracy. Beleva also noted that the educational system fails to respond to the needs of the business sector. (This, of course, is a well-known problem also in many established market economies.)

Beleva also pointed to the spread of poverty in the transition economies, a feature that was not discussed by Nesporova. She referred to World Bank data showing that in Bulgaria in 2001, for example, some 40 per cent of the unemployed were poor (assuming a poverty threshold of $4.2 per day). There is a vicious circle in which unemployment, lack of job opportunities and limited social welfare funds lock people into a poverty trap. This significantly reduces not only their chances of re-entering the labour market, but also risks having adverse effects on the employment opportunities of their children.

In the general discussion, there was agreement that the skill mismatch, inadequate transport systems and the lack of housing markets are key factors in the labour market performance of the transition economies especially as they all impede sectoral and geographical labour mobility. But the main focus was on the labour market implications of EU accession for the 10 candidate countries expected to join in 2004. There were concerns that the adoption of EU legislation in areas such as health and safety would reduce labour market flexibility and thus restrain employment creation. But it was pointed out that the legislation, which the candidate countries will have to adopt is not that rigid in the areas of labour law and social protection. In fact, there is no *acquis communautaire* in the area of employment protection. But EU membership means joining the single market and this will raise competitive pressures, which are likely to have adverse repercussions in the labour markets. Financial support from the EU to improve the transport and housing infrastructure, however, should help to raise labour mobility and improve the competitiveness of firms. It was also noted that in view of the predominant structural component of unemployment in the transition economies, the emphasis of economic policy had to be on supply-side measures (training, re-education etc.) in contrast to the demand-side emphasis advocated by Jackman for western Europe. In this connection it was remarked that fiscal stimuli (reduction of non-wage labour costs; corporate tax cuts) may not translate – at least in the short run – into higher demand for labour if the corresponding savings are used for business restructuring and capital-intensive investments designed to raise labour productivity. Finally, it was pointed out that labour market statistics for some of the CIS states may provide too positive a picture of the actual situation, and this should be taken into account when making international comparisons.

A common theme in the first two sessions was the need to raise employment rates from their currently low levels in Europe. Indeed, the EU countries, at the summit held in Lisbon in March 2002, set themselves the target, using the United States as a benchmark, of raising the average employment rate to at least 70 per cent by the year 2010, up from about 62.5 per cent in 1999. Over the same period, the employment rate for women is targeted to reach at least 60 per cent. The problem of low employment rates is especially acute in southern European countries (Greece, Italy, Portugal and Spain) but the gap to be closed in order to meet the Lisbon target is also significant in a number of other countries (Belgium, France, Ireland and Luxembourg).

To raise employment and reduce unemployment, however, will hardly be possible without taking a closer look at the existing social policy framework, such as unemployment benefit systems, because these institutions affect the flexibility of labour markets and their capacity to adjust to changes in economic conditions. In other words, there may be a conflict between the target to increase labour market efficiency and the goal to maintain or enhance existing social protection and redistribution schemes. How these targets are traded off, of course, is ultimately a question of national (societal) preferences. This was the main theme of the third session, in which **Tito Boeri** (Università Bocconi and Fondazione Rodolfo Debenedetti) presented a paper on "Increasing the size of the European labour force: the relevant trade-offs".

Boeri noted that, in general, the Lisbon targets cannot be met simply by reducing the number of persons in longer-term unemployment but will require an increase in labour force participation rates, mainly of women and young persons, but also of older workers. In the southern European countries it will also involve shrinking the size of the informal sector. As this sector is largely made up of low-productivity jobs, the curbing of the informal sector risks increasing unemployment unless a sufficiently large number of low-wage jobs are generated in the "formal" sector. In addition, given the specific features of the other groups mentioned above, there will be a need to create more part-time and temporary jobs.

A major challenge is to achieve the increase in employment rates without a significant decline in the average level of productivity. But all the main options for raising employment rates will tend to lower average productivity levels for the whole economy, given the compositional effects that are involved. Associated with this is a trade-off between productive efficiency (in the sense of raising employment) and *ex ante* distributional equity. More job creation at the lower end of the productivity scale is likely to lead to increased inequality of earnings, as well as calls for reform of social welfare systems, mainly in the sense of tightening eligibility criteria for receiving unemployment benefits, and to raise the comparative rewards for low-productivity labour.

In other words, raising participation rates will require reducing the degree of "decommodification" of labour, i.e. the freedom and protection that social policies (unemployment benefits, pension rules, replacement wages and the like) provide workers with by giving them a credible option not to have to accept any kind of job and thus prevent the emergence of a class of "working poor". This is, of course, an essential function of social policy and Boeri emphasizes therefore that not all European labour market reforms should aim at achieving labour market efficiency regardless of its impact on distributional objectives. The challenge then is to design social reform strategies that, at least partly, reconcile employment and equity objectives. In this context, Boeri advocates two strategies, first, the activation strategy and, second, the provision of financial incentives to work at relatively low wages (in-work benefits).

Activation strategies comprise three instruments: job search assistance and tests to quickly reintegrate unemployed persons in the labour market; job counselling; and "suitable job" tests and sanctions. All these measures combine to bring the unemployed back to work with (formal or informal) pressures to actively look for jobs, the so-called "help and hassle" approach. This approach requires an effective public employment service to support job search and to activate the unemployed. It also requires a coherent legal framework, including rules for sanctions.

Boeri points out that the available (largely experimental) evidence suggests that activation policies have been most successful in stimulating the return of women to the labour market. The evidence, however, is much more mixed in the case of unemployed young persons with limited or no work experience and there is little evidence as yet about the effectiveness of the British New Deal that aims to promote the labour market integration of the young unemployed.

The second strategy, consisting of financial incentives, involves two types of instruments. The first, the employment conditional incentive (ECI) is a subsidy to increase labour supply; the second, a wage subsidy, operates on the labour demand side. The ECI can be provided as a tax credit or as a benefit. The overall effectiveness depends on the actual design of the measure and, especially, how well it is targeted at the individuals to be reached. Wage subsidies for low-wage employees shift out the labour demand curve, and their employment effect is an increasing function of the elasticity of the labour demand and supply curves for low-wage workers. Boeri notes that there is a lack of robust empirical estimates of the size of both these elasticities. Overall, the effectiveness of wage subsidies is a matter of design in order to avoid deadweight losses, crowding out effects and the creation of perverse incentives to firms. But Boeri argues that wage subsidies in combination with minimum wages can be rather effective in reducing the size of the informal sector given that they create incentives for employers and employees to declare low-productivity jobs. This is especially relevant for countries with a large shadow economy, as is the case in southern Europe.

Boeri concludes that the attainment of the Lisbon employment targets will not be possible without comprehensive institutional and social reforms. These will have to include more decentralized wage bargaining systems and reforms of the pension system to arrest the trend to early retirement and raise the participation rates of older workers.

In his comments, **Jan van Ours** (Tilburg University), agreed to a large extent with the proposed strategy of raising employment rates by means of activation measures and in-work benefits. He noted that employment rates for prime-age males are already very high and will be very difficult to increase further in view of the adverse characteristics (e.g. long-term unemployment; disabilities) of the non-employed in this age group. In contrast, there is quite a large variation across countries in the employment rates of prime-age females and elderly workers, both male and female, which should be targeted by policy. While supporting the "help and hassle" approach, van Ours was more sceptical about the effectiveness of financial incentives in raising the employment rates of prime-age females especially in countries with low employment rates (as is the case in southern Europe), which he thinks also require measures to stimulate part-time work. In a similar vein, replacing early retirement schemes by gradual retirement schemes that fostered access to part-time jobs could raise the employment rates of elderly persons.

The second discussant, **Vladimir Gimpelson** (The Higher School of Economics), noted that, in general, the transition economies had been able to maintain *relatively* high employment rates in the face of deep economic crisis but this had been accompanied by rising wage inequality and an increasing proportion of low-wage, low-productivity jobs. Other features of the situation included wage arrears, the growing importance of short-time work and a large proportion of activities moving into the informal sector. These helped to contain social and political tensions, but the basic trade-off was the same as that described by Boeri for the western market economies.

In his comments, Gimpelson focused on labour market developments in Russia since the onset of the economic transformation process in 1992. There was a sharp fall in the employment rate in Russia from some 80 per cent in 1992 to some 65 per cent in 1998, but this is a relatively small change when compared with the collapse of output by more than 50 per cent over the same period. The recent economic recovery had led to an increase of the employment ratio to some 70 per cent in 2000, i.e. Russia is ahead of the EU in terms of the Lisbon target. But Gimpelson remarked that in maintaining this relatively high employment rate, Russia could not escape from the basic trade-off between labour market efficiency and social policy objectives as described by Boeri.

In fact, the change in the employment rate conceals a sizeable outflow from the labour force into the informal sector and a significant rise in unemployment. At the same time, the still high employment levels in the face of significantly lower activity can only be maintained by accepting increasing wage inequality. Gimpelson sees that a major challenge ahead is to raise the employment rates while at the same time compressing the low-wage, low-productivity segment of the labour market. Whereas relative insider power and other social factors may have led to expectations that the decline in labour force participation and employment rates would be largely at the expense of women, this was not in fact the case: males and females were affected (in the aggregate) to a similar extent. Gimpelson explains this somewhat surprising outcome by the fact that females benefited from their employment experience, mainly in the public sector services, and the acquisition of skills and networks developed under the former socialist system.

The other main features of labour market participation and employment rates in Russia are broadly similar to those in western countries. Employment rates of prime-age groups have remained quite high, while the younger and the oldest age groups have withdrawn from the labour market to a much greater extent. The adverse labour market conditions in rural areas were largely accommodated by the growing importance of activities in the informal sector.

Gimpelson also looks briefly at likely labour force developments in Russia up to 2015, under the assumption of a broadly constant labour force participation rate. He concludes that beyond that year the demographic trends imply a shrinking size and increased ageing of the labour force. This could become a serious constraint on Russia's growth potential and leads to the question as to what extent the demographic trends can be offset by raising the retirement age and/or active migration policies.

In the *general discussion*, the question was raised of what role part-time work has to play in raising the participation rates of female and older workers and whether part-time work really corresponds to the preferences of people. Is the choice between full-time and part-time or between part-time and inactivity? There was some agreement that part-time work was instrumental in raising the participation rates of females and older persons. As regards older persons, it was also pointed out that the incentives to early retirement need to be reduced. Sweden was mentioned as an example where pension reform had raised the participation rates of older persons to very high levels. Van Ours noted that there was often confusion between part-time/full-time and temporary/permanent jobs. In the Netherlands, many part-time jobs are based on permanent contracts. He quoted survey data, which suggest that there are many persons working part-time who would prefer to work full-time but that the proportion of full-time workers who would like to work part-time is actually larger. He also pointed to the large proportion of men (about 20 per cent) who work part-time in the Netherlands. He also defended the "help and hassle" policies that had often provided a needed spur to some of the unemployed to find a job; these policies should not be denounced as harming the unemployed. Tito Boeri added that these activation policies involve a kind of mutual responsibility of the unemployed and public institutions to make serious efforts to foster the reintegration of the former in the labour market. Boeri also noted that increased earnings inequality might be required to create more jobs but that there should be a redistribution mechanism put in place to prevent an excessive increase in income inequality.

Not all domestic labour market problems, however, can be solved by focusing solely on the domestic labour supply; they can also be addressed by opening labour markets to foreign workers. The final paper by **Herbert Brücker** (Deutsches Institut für Wirtschaftsforschung) dealt therefore with the economic effects of labour migration (on host countries). There has been increased interest in issues related to migration in recent years partly because of the rapid diffusion of new technologies which have highlighted important shortages of high-skilled workers in the field of information and communication technologies in many developed market economies. Immigration is also seen as necessary to better cope with the economic and social consequences, and especially the fiscal implications, of progressive population ageing and declining populations in the developed market economies. The topic has also increased in importance because of the forthcoming enlargement of the EU and expectations that it may trigger significant labour movements from east to west given the sizeable gap in per capita incomes, which is one of the main forces driving migration.

Brücker notes that west European migration policies over the past two decades were shaped by the apprehensions in the host countries about inflows of foreigners, which were associated with increased unemployment, lower wages and deteriorating social welfare. In fact, such apprehensions may partly explain why there is a research bias towards the impact of immigration on host countries, while the impact on source countries is often neglected, although the consequences for the latter might be just as important.

Whereas barriers to the movement of people between the member states of the EU and European Economic Area (EEA) have been eliminated to an extent that is unique among regional trade areas, immigration policies towards non-EU and non-EEA countries have become more restrictive, although these areas are the main sources of immigration in western Europe. These policies have remained largely in the national domain. Migration policies are sometimes discriminatory in terms of skilled and unskilled migrants, as was illustrated by the recent debate over measures to deal with the shortage of IT skills in some western European economies.

Brücker provides interesting information on the human capital characteristics of migrants in western Europe: migrants are younger than natives, most of them are male, and their average skill levels tend to be below those of natives in the main EU receiving countries. Moreover, the unemployment and welfare dependency rates for immigrants are higher than those for natives, a reflection of their human capital characteristics. However, for a given level of skills and other dimensions of human capital, non-natives depend to a lesser extent on welfare and unemployment benefits than do natives.

In order to assess the impact of migration on income and employment, the author uses a standard model for a closed economy calibrated for either clearing labour markets or persistent unemployment. The general upshot is that in this comparative-static framework migration leads to allocative efficiency gains, i.e. the overall macroeconomic effects on the host country are positive. But the distributional effects depend on whether foreign and domestic labour are complements or substitutes. In the former case, migration has a positive impact on the wages of domestic workers whereas in the latter the effect is negative.

The calibration results from the theoretical model, however, contrast with the relatively large uncertainty surrounding empirical estimates of the impact of migration on wages and employment in western Europe. This reflects partly the restrictive assumptions of the estimated model and the use of instrumental variable estimation techniques. These estimates suggest that the impact of migration on the wages of natives is relatively small, varying in the majority of studies within a range of +/- 0.3 per cent for a 1 per cent increase in the host economies' labour force due to migration. There is also little support for the claim that an increase in foreign workers leads to a rise in unemployment. The available empirical estimates suggest that displacement effects, if any, are small in western Europe, especially as regards the impact on unemployment rates.

But migration has been in the focus of intense discussion not only because of the expected labour market impact but also because it is seen as a vehicle to cope, at least partially, with the fiscal implications of the significant secular ageing of populations in Europe and which, *ceteris paribus*, is projected to lead to a dramatic increase in the dependency ratio in the period up to 2050 with associated problems for public (pay-as-you-go) pension schemes and social welfare expenditures.

The question is what increase of migration would be required to significantly affect the rate of population growth and the change in the dependency rate. Brücker points to United Nations calculations, which suggest that to keep the proportion of the working-age population constant in the EU will require an influx of some 1.6 million immigrants per year over the period 2010-2050, an increase by about a factor of three compared with the period 2005-2010. This corresponds to an increase in the net immigration rate from on average 0.8 persons per thousand of the population over the period 1950-2000 to an average of 3.7 persons over the next 50 years. In the absence of naturalization and given the projected sharp decline in the number of natives, this would entail a significant increase in the proportion of foreigners in the total population.

It may be doubted whether migration on such a scale would be politically sustainable; but even if it were, the question is whether it would be forthcoming on this scale. Brücker notes that while the large income gap between western Europe and regions in eastern Europe and the CIS and northern Africa, etc. would continue to provide an incentive for migration, the significant population ageing projected also in these source regions will tend to reduce the migration potential. This suggests that migration may mitigate somewhat the secular ageing process in the traditional host countries of western Europe, but it cannot arrest it.

This also implies that migration can only alleviate somewhat the fiscal burden in ageing societies via the net contribution of migrants to public sector budgets. Migration cannot eliminate the fiscal burden, given plausible assumptions about the future magnitude of inflows of foreign workers. Using the analytical framework of generational accounting, it is estimated that in the case of Germany the "sustainability gap", i.e. the difference between the (net present value of) projected long-term government consumption and debt servicing on the one hand, and expected tax revenues on the other hand, can be reduced from about 6 per cent of GDP per annum (in the case of no migration) to some 5 per cent of GDP per annum if there is annual immigration of 200,000 workers, which corresponds to the historical trend.

Brücker also emphasizes that migration comes at a cost to the source countries of west European migration, because of the resulting deterioration in their own public finances. This holds especially for the countries of central and eastern Europe. This points to the need for compensatory transfers to offset the fiscal losses, including public expenditure on education and training, in the source countries.

The first discussant, **Stanislawa Golinowska** (Research Institute for Labour and Social Affairs), provided some insights into migration from a central and eastern European perspective. She noted that with the collapse of the Berlin wall, the main motives for emigration from the region have changed from mainly political to economic reasons. Migration from the CEECs is mainly of a temporary nature, linked to short-term labour contracts and tight regulation by the European Union and other west European countries. The tight regulation, in turn, appears to have triggered a considerable amount of illegal labour movement: estimates for Poland suggest that the importance of emigration without work permits is of the same order of magnitude as legal labour movements. In addition, there is also considerable commuting across the common borders with western countries.

But Golinowska points out that the CEECs themselves have also been experiencing significant inflows of foreign workers, especially from the CIS but also in connection with the inflow of FDI from western countries. In addition, the political and economic changes since 1989 have stimulated return migration.

The skill profile of emigrants has also changed. Under communism, most emigrants were in the category of skilled labour. Since 1990, however, the majority of them have only basic vocational qualifications. This reflects not only the stronger demand in the CEECs for qualified and highly-qualified workers but also the fact that economic conditions in the region have improved and are expected to improve further in the years ahead. Golinowksa rightly emphasizes that expectations about future living standards in the source countries are an important factor influencing the decision to migrate, besides the actual real income gap. But migration from the CEECs has also been influenced by the active recruitment policies of western countries designed to attract workers with specific skills in order to solve specific problems in certain sectors (e.g. health care, cleaning services, ICT).

The second discussant, **Georg Fischer** (European Commission), agreed that the available empirical evidence points to only a limited impact of migration on labour markets in host countries. He also noted that given the current age structure, migration is likely to have a positive fiscal impact in the host country in the short run, but the long-run effects are less clear. Fischer emphasized that the paper did not mention anything about the important issues of maintaining social cohesion and the associated need to strive for the social inclusion of migrants. He suggested that these matters could be addressed either via selective immigration policy or by a specific social integration policy focused on immigrants. This is obviously an important issue for the host country population, reflected in the fact that concerns about social inclusion (or, rather, exclusion) tend to be at least as important as worries about the perceived negative economic implications of migration. He recommended that social integration policy should aim at providing incentives to immigrants to adapt to the local environment. Fischer also noted that the general macroeconomic benefits of immigration are not very noticeable for the host country population, whereas the negative effects (e.g. the loss of a job) are more directly felt by individuals and more easily associated with migration, especially by those looking for jobs.

In the general discussion, the question was asked to what extent the economic benefits of migration to the host country are offset by the negative effects in the source countries. In other words, is international migration a zero-sum game? This, of course, is a highly complex issue, especially when the external effects of human capital formation and the dynamic processes shaping core-periphery developments are taken into account. It was argued that in the case of temporary migration, the effects on the source countries are likely to be positive in terms of lower unemployment, the remittances from persons working abroad, and the experience and skills accumulated by return migrants. There remained, nevertheless, concerns about the adverse economic effects on the source country in the case of long-term migration of high-skilled workers ("brain drain"). These pointed to the need for some sort of financial mechanism to compensate for the budgetary impact of migration, especially with regard to pension obligations, but this was not seen to be a realistic policy option. The question was also raised as to whether the empirical estimates of the labour market effects of migration in Austria and Germany discussed in the paper are representative for other countries as well.

General conclusions

Against this background, the focus of the Spring Seminar on labour market challenges was timely, given the "primacy of work and welfare for the life chances of ordinary citizens and, by implication, for the political legitimacy of democratic polities."[100]

It would, of course, be ideal if at the end of such a seminar there were broad agreement about the causes of unemployment and what should be done to reduce it. In fact, as mentioned above, there was general agreement on many aspects of the problem and on some of the proposed strategies, but there was also disagreement on important issues. One important message is that labour markets in the various European countries differ considerably, both in terms of performance and in regard to existing labour market institutions. It is therefore misleading to make sweeping statements to the effect that "European labour markets are too rigid". It has been pointed out elsewhere that many labour market institutions that are often taken as evidence of labour market rigidities in fact have no significant impact, if any, on unemployment.[101]

Another noteworthy feature of the discussion at the Seminar was the strong emphasis placed on microeconomic factors in the analysis of labour market performance, notably as regards western Europe. Thus, Jackman pointed to the importance of stimulating the demand for labour by means of reducing the regulatory environment surrounding new firm creation and by other microeconomic measures to reduce the costs to enterprises of creating more jobs. In contrast, the impact of macroeconomic policies on the level of aggregate effective demand for goods and services in the economy was largely ignored. However, Nesporova emphasized the need to create a conducive macroeconomic environment to promote employment growth in the transition economies. In fact, structural reforms and demand policies are likely to be complementary. Microeconomic reforms are unlikely to have the desired impact on job creation if aggregate demand in the economy is weak; conversely, the employment response to strong demand growth will be determined by the degree of labour market flexibility.

With regard to the transition economies, one of the most important messages was the extent to which the former economic system has allowed a significant deterioration in the quality of the labour force. It has been frequently asserted that the central and east European economies embarked on the transition to market economies, and on the required reform and restructuring process, with large stocks of qualified and well-educated labour that could easily adjust to the radical change in economic conditions. This has proved to be highly misleading. In fact, a considerable mismatch has emerged between the demand for and the supply of skill in the new economic environment, a mismatch that has been amplified by the lack of adequate transport infrastructure and the virtual absence of a market for housing. These all constitute important obstacles to labour mobility and have resulted in the petrifaction of regional labour market disparities. The CIS countries, moreover, face the challenge of transferring the employment protection services from enterprises to the public sector and coping with the social and fiscal consequences of the associated increase in open unemployment.

Raising employment rates in western Europe and the transition economies may have to go along with increased wage inequality given the relative increase in demand for skilled labour and the need to reduce the size of the informal sector, which is largely made up of low-wage, low-productivity jobs. This runs counter the traditional egalitarian economic model that is widespread in continental Europe, and the challenge is therefore to design redistributive policies that will mitigate the impact of structural change on personal income distribution. More generally, many of the recent and envisaged reforms of labour market institutions will tend to shrink the traditional boundaries of the "commodification" of labour.

There was broad agreement that the existing early retirement schemes in Europe are not sustainable in the context of progressive population ageing and the associated problems facing the provision of retirement pensions. (Such early withdrawals from the labour market are also an important waste of economic resources.) Another important point was that immigration would only be able to mitigate, not solve, the fiscal problems associated with population ageing. Rather, coping with the challenges of population ageing requires the development of comprehensive national strategic frameworks that go beyond immigration policies. Such strategies will need to include, *inter alia,* policies to achieve sustained economic growth, higher rates of labour market participation of all age groups, an increase in the retirement age and greater intergenerational solidarity. The principal elements of such a framework were recently agreed upon and adopted at the UNECE Ministerial Conference on Ageing, held in Berlin on 11-13 September 2002.[102]

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[100] F. Scharpf and V. Schmidt (eds.), *Welfare and Work in the Open Economy, Vol. 1: From Vulnerability to Competitiveness* (Oxford, Oxford University Press, 2000), p. 3.

[101] S. Nickell, "Unemployment and labor market rigidities: Europe versus North America", *Journal of Economic Perspectives,* Vol. 11, No. 3, Summer 1997, pp. 55-74.

[102] United Nations Economic and Social Council, "Regional implementation strategy for the Madrid international plan of action on ageing 2002" (ECE/AC.23/2002/2/Rev.6), report by the Economic Commission for Europe, 11 September 2002.

CHAPTER 2

DETERMINANTS OF UNEMPLOYMENT IN WESTERN EUROPE AND POSSIBLE POLICY RESPONSES

Richard Jackman

2.1 Introduction

There can be no doubt that the experience of persistent mass unemployment in much of western Europe (and in some countries outside Europe) since the mid-1970s has been one of the most conspicuous and costly failures of macroeconomic management in the postwar era. It has been at root a failure of economic understanding, in that the problem had not been foreseen and could not be solved by the policies suggested by the then prevailing (neo-Keynesian) orthodoxy. Subsequently the amount of economic analysis of this problem has been absolutely enormous, in part because of the linked need to reorientate macroeconomic policy, so that for much of the period policies were introduced in something of a theoretical vacuum. More recently, though, more of a consensus has developed around the idea that sustainable low unemployment can be achieved only through a well-functioning labour market, though this of course leaves room for debate over the types of policy which might work best.

This paper first summarizes the key facts, both of unemployment in western Europe relative to the rest of the developed world, and of the different experiences of individual European countries. It then outlines the main explanations which have been offered, and attempts, with the benefit of hindsight, to evaluate their relative importance. It then proceeds to a brief examination of the various policies attempted by governments, and of the literature evaluating their impact and efficacy. Of course, the literature on all these subjects is vast and this account is necessarily selective. Rather than attempt to cover everything, the paper endeavours to look at some key issues and offer some new interpretations in particular of the relationship between unemployment and labour market participation. The paper concludes by linking together these various strands, in an attempt to relate the major causes of persistent unemployment to policy recommendations.

2.2 Background: the data

(i) The measurement of unemployment

International comparisons of unemployment were for a long time bedevilled by problems of the comparability of data collected in different countries. Most early measures of unemployment were compiled from statistics of those in receipt of unemployment benefits or of other social assistance by reason of being unemployed. Obviously this “claimant” measure is affected by the rules and regulations affecting benefit eligibility, and differences across countries in this measure may reflect differences in such rules and regulations rather than differences in the number of people out of work. Matters in this respect have improved enormously in recent years with acceptance among governments, international institutions and academic economists that unemployment is best measured by the ILO definition, according to which unemployment is measured as the number of people out of work, looking for work and available for work as a proportion of the total labour force. The ILO and OECD have at the same time encouraged the introduction of labour force surveys, which measure unemployment on this basis in a manner which attempts to be consistent across countries.

It should be stressed that the ILO measure represents a labour force state, but says nothing about the reasons why people may be in that state. Most importantly, it does not distinguish “voluntary” from “involuntary” unemployment. It distinguishes the state of unemployment from that of being “out of the labour force” by the criterion of having searched for work in the past four weeks, a criterion which may itself be both subjective and sensitive to economic conditions.

In particular, it can be argued that attempts to give some objectivity to the notion of search have recreated a link between this measure and benefit entitlement. A person may claim they are searching for work because they are reading the job vacancy advertisements in the press, but in practice most surveys will adopt a more energetic definition of job search, for example, at least registering at an employment exchange as available for work. Whether or not an unemployed person does this, however, may depend on whether or not they will then become entitled to benefit.

Even more seriously, whether or not an individual is actively searching for work will be affected by whether or not such search is perceived to have any chance of success. It is well known that as registered unemployment rises over the cycle, unemployment on the ILO definition rises, but to a smaller extent, reflecting the "discouraged worker" effect, that is, people dropping out of the labour force because job prospects are poor. There may similarly be a "structural" discouraged worker effect, in that if in a particular economy there are no jobs in particular occupations, or, for example, for part-time or older workers, then such people will not search actively and will not be counted as unemployed. It will be a major part of the argument of this paper that such structural effects are very large and should be a central concern for policy.

People may be in employment or they may not, and only relatively few of those not working are classed as unemployed. The reason unemployment is normally regarded as a matter of greater concern than non-participation is that unemployment is seen as involuntary and reflects a failure of the labour market. In contrast, non-participation is seen as voluntary, and results from a deliberate choice on the part of particular individuals to devote their time to their families, to study or to take early retirement. However, it has to be said that variations in the non-participation rate over time and across countries do not appear in any obvious way related to families, education participation rates or the health of elderly people. This suggests that much of non-participation is more in the nature of "hidden" unemployment than of voluntary non-participation. A corollary is that in making comparisons across countries with similar socio-economic characteristics a more valid labour market statistic may be the proportion of the population in work, rather than the (possibly arbitrary) subset of those not in work who are classified as unemployed.

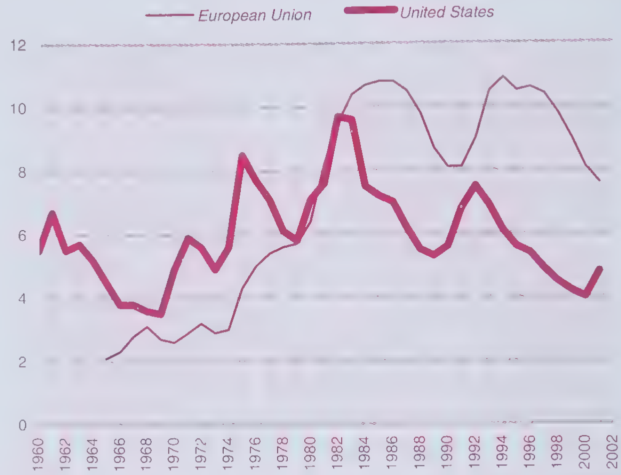
(ii) Unemployment in Europe

I start with the figures for unemployment according to the conventional standardized definition. While it now tends to be taken for granted that the United States has lower unemployment than Europe, this is in fact quite a recent development. Chart 2.2.1 compares European and American unemployment over the past 40 years. The unemployment rate in Europe was consistently lower than that of the United States until the late 1970s and has been significantly higher only during the second half of the period, since about 1984. Like Europe, the United States suffered a very sharp rise in unemployment at the beginning of the 1980s, but, unlike Europe, the unemployment rate then quite quickly fell back to its postwar average of around 6 per cent. In contrast European unemployment averaged around 3 per cent in the 1960s and early 1970s, but more like 10 per cent in the 1980s and 1990s.

CHART 2.2.1

Standardized unemployment rates in the European Union and United States, 1960-2002

(Per cent)



Source: OECD, *Economic Outlook 1990* and *Employment Outlook* (various issues) (Paris); author's calculations.

Note: For 1965-1988 the European Union consists of Belgium, France, Germany, Italy, Netherlands, Portugal, Spain and the United Kingdom only.

The economic history of the period provides some insight into the causes of these developments and of the differences between European labour markets and those of the United States. The sharp rise in unemployment in the early 1970s followed the first OPEC oil price shock, and its deflationary impact on aggregate demand. However, attempts by governments during the 1970s to stimulate demand and bring down unemployment appeared simply to lead to a resurgence of inflation towards the end of the 1970s. Following the second oil price shock in 1979, it was generally accepted that macroeconomic policy had to concern itself primarily if not exclusively with the control of inflation. From the early 1980s, the stance of macroeconomic policy in most countries was deflationary, and the impact on unemployment depended on the capacity of the labour market to adjust to this new regime. The clear picture is that the American labour market recovered fairly quickly, whereas in Europe unemployment not only remained at a much higher level than before, but even showed some tendency until very recently to rise further rather than to fall back to its level of the 1960s. Unemployment in the United States reached exceptionally low levels in the 1990s, and since the mid-1990s there has also been a clear downward trend in European unemployment.

It is at the same time essential to recognize that differences in unemployment rates across European countries are large both in absolute terms and relative to the difference between Europe and the United States. Thus, in 2000, unemployment rates in Europe ranged from only 2.7 per cent in the Netherlands or Switzerland to over 14 per cent in Spain (table 2.2.1). Europe cannot therefore in this context be regarded as a homogeneous bloc: differences between European

TABLE 2.2.1

Employment and unemployment, persons aged 15-64, 2000

	Employment/ population ratio	Unemploy-ment rate	Participation rate (Per cent) All	Men	Women
Europe					
Austria	67.9	4.7	71.3	80.1	62.5
Belgium	60.9	6.6	65.2	73.8	56.6
Denmark	76.4	4.5	80.0	84.0	75.8
Finland	67.0	9.9	74.3	76.5	72.0
France	61.1	10.1	68.0	74.4	61.7
Germany	66.3	8.1	72.2	81.1	63.2
Greece	55.9	11.3	63.0	77.1	49.7
Ireland	64.5	4.4	67.4	79.1	55.7
Italy	53.4	11.0	59.9	73.8	46.2
Netherlands	72.9	2.7	74.9	83.9	65.7
Norway	77.8	3.5	80.7	84.8	76.5
Portugal	68.1	4.1	71.0	78.8	63.6
Spain	56.1	14.1	65.3	79.1	51.8
Sweden	74.2	5.9	78.9	81.2	76.4
Switzerland	79.6	2.7	81.8	89.4	73.9
United Kingdom	72.4	5.6	76.6	84.3	68.9
European Union	65.7	6.3	70.1	78.9	59.8
Other OECD countries					
United States	74.1	4.0	77.2	83.9	70.8
Japan	68.9	5.0	72.5	85.2	59.6
Australia	69.1	6.3	73.8	82.0	65.5
Canada	71.1	6.9	76.3	82.1	70.5
New Zealand	70.7	6.1	75.2	83.2	67.5
Republic of Korea	61.6	4.2	64.3	76.9	51.8

Source: OECD, *Employment Outlook* (Paris), 2001, table B.

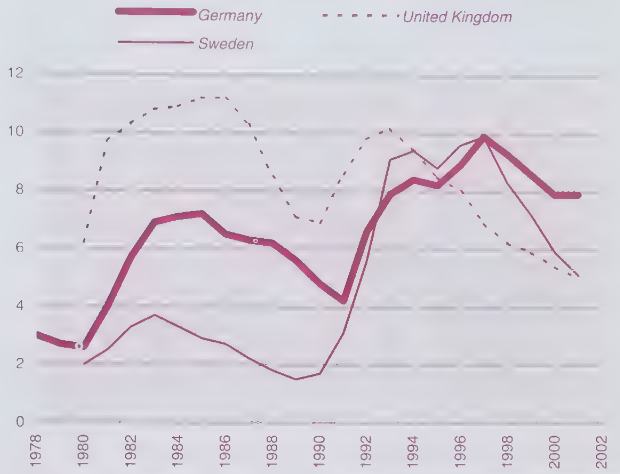
countries in measured unemployment can be larger than the difference between the European average and that of the United States. While not remarkable in itself this observation counsels against any simplistic association of United States policies with low unemployment rates. By 2001, no less than seven European countries had unemployment rates below 5 per cent, which might be taken as approximating full employment. Not only that, but it may be noted that some of these are Nordic countries whose labour market policies are very different from those of the United States. Even so, it can be seen from table 2.2.1 that no major economy outside Europe recorded an unemployment rate in excess of 7 per cent, whereas six western European economies have higher rates than this, including four of the largest, namely France, Germany, Italy and Spain.

Further, the ranking of European countries by unemployment rate has not been stable over time. Some of those with the worst unemployment records in the 1980s are among the success stories of recent years (Ireland and the Netherlands, but also Denmark and the United Kingdom). On the other hand some of those, which coped best in the early period such as Germany and Sweden, have fallen on harder times (charts 2.2.2 and 2.2.3). These variations over time, again, do not seem to correspond in any very obvious way to changes in labour market institutions.

CHART 2.2.2

Standardized unemployment rates in Germany, Sweden and the United Kingdom, 1978-2002

(Per cent)

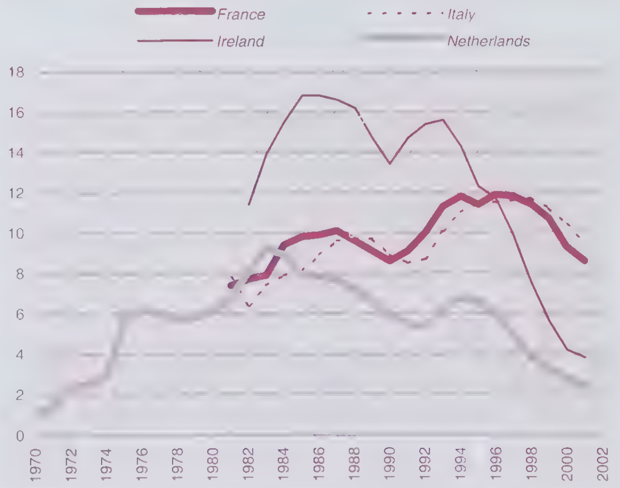


Source: As for chart 2.2.1.

CHART 2.2.3

Standardized unemployment rates in France, Ireland, Italy and the Netherlands, 1970-2002

(Per cent)



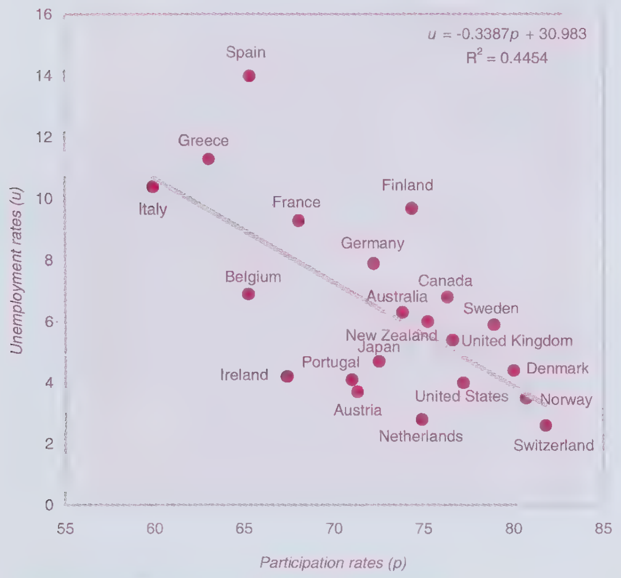
Source: As for chart 2.2.1.

We have already noted, however, that unemployment is not necessarily the most instructive measure of conditions in the labour market. On other measures, such as the proportion of the working-age population in employment, or the participation rate, the differences between Europe and America are even more stark. In 2000, just over 74 per cent of working-age Americans were in employment, against an average of just under 66 per cent in Europe. More people are in work in America both because the participation rate is higher (more of the working-age population are in the

CHART 2.2.4

Unemployment versus participation rates across OECD economies in 2000

(Per cent)

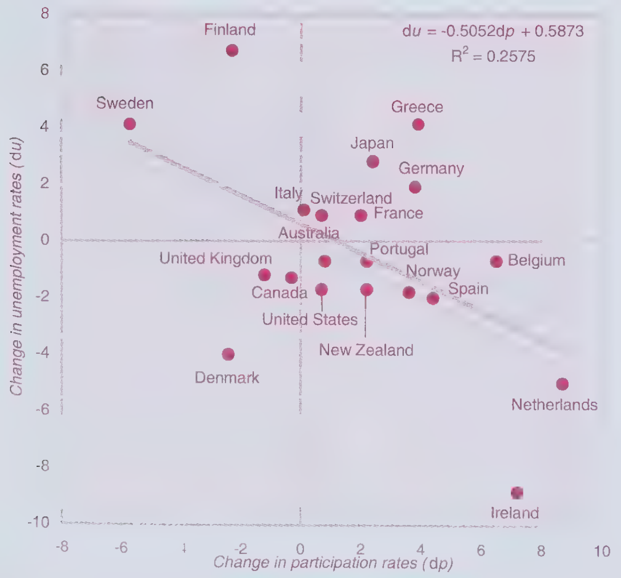


Source: OECD, *Employment Outlook 2001* (Paris).

CHART 2.2.5

Unemployment versus participation rates across OECD economies, 1990-2000

(Percentage points)



Source: As for chart 2.2.4.

labour force) and because the unemployment rate is lower. But differences in participation account for a larger part of the difference in employment.

However, as with the unemployment rate, it is notable that employment/population ratios vary substantially across European countries. The ratio is particularly low in Italy (53.4 per cent), in Greece (55.9 per cent) and in Spain (56.1 per cent), while being exceptionally high in countries such as Norway (77.8 per cent) and Switzerland (79.6 per cent).

It is notable that countries with high unemployment rates also typically have low employment/population ratios, and the variation in the employment/population ratio appears in most cases large as compared to the variation in unemployment rates. By definition, the employment/population ratio (E/P) is the product of the employment rate (E/L) and the participation (or activity) rate (L/P), where E is employment of working-age people, L the labour force and P the population of working age. The employment rate (E/L) is of course equal to one minus the unemployment rate (U/L) since employment and unemployment sum to the labour force. Table 2.2.1 suggests that countries with high unemployment rates typically also have low participation rates, so that variations in employment are greater than would be implied by the unemployment rate differentials on their own. In fact the variations in participation rates are generally greater than the variations in unemployment rates. For example, comparing the employment/population ratio for Europe with that for the United States, of the 8.4 percentage point gap, three quarters is accounted for by differences in the participation rate, and only one quarter by the lower unemployment rate.

Chart 2.2.4 contrasts the unemployment rate and the participation rate across OECD economies. It is clear that participation rates are strongly and negatively correlated with unemployment rates. It may also be noted that the countries which have been most successful in reducing their unemployment rates, have also experienced higher labour force participation rates (chart 2.2.5). To the extent therefore that one is concerned with overall employment, the key explanatory variable is the participation rate, and we consider this further in section 2.3 below.

2.3 Explanation

(i) A brief review of models

(a) Simple Keynesian models

The theoretical framework of Keynesian models supposes that in the short run economic activity is driven by the state of aggregate demand, and this in turn determines the unemployment rate. However, excessively high demand feeds into inflation, and it is the trade-off between unemployment and inflation which determines the sustainable unemployment rate. The key relationship is the Phillips Curve, which in expectations augmented form can be written:

$$P = P^e + f(z,u) \tag{1}$$

In equilibrium ($P=P^e$), the rate of unemployment consistent with any expected rate of inflation, usually taken as stable or non-accelerating inflation, the NAIRU, is then given by $u_N=g(z)$, that is to say that unemployment takes whatever level is required to offset the impact of wage pressure or wage push on inflation. Trade unions are generally seen to have a key role in this process and wage pressure variables are those which measure the power of unions in the wage bargain. The factors seen to be critical include the proportion of the workforce unionized (or covered by collective bargaining), and the extent to which union power is supported by social security measures such as unemployment benefits or by legal or institutional measures such as employment protection legislation.

(b) Simple structural models

These take their inspiration from Milton Friedman's notion[103] of the "natural" rate of unemployment, which is explicitly grounded in labour market institutions, and in particular the various imperfections and rigidities held to characterize the labour market. The starting point is therefore the natural rate, but in the absence of perfect information demand shocks create cyclical movements of familiar form. From this framework a Phillips Curve relationship can be derived (although it is price shocks that lead to fluctuations in unemployment rather than unemployment influencing wage demands), which takes the form:

$$P = P^e - h(u - u^*) \qquad (2)$$

where u^* is the natural rate of unemployment and $h>0$. The imperfections and rigidities which determine the natural rate of unemployment include such factors as the role of trade unions, labour market legislation and taxes and benefits, that is, much the same variables as are held responsible for "wage pressure" in Keynesian models. Thus, in terms of equations, if we write $u^* = u(z)$, and the z variables in these models are much the same as those of the Keynesian models, the two models are essentially equivalent in terms of their empirical implications. Both imply equilibrium unemployment rates determined purely by institutional or structural factors, with fluctuations about the equilibrium being determined by fluctuations in aggregate demand or other macroeconomic shocks.

Models of this type appear consistent with the behaviour of the aggregate unemployment rate in the United States, but not with European experience. In the United States, the institutions of the labour market have remained fairly static over the years, and the unemployment rate itself has fluctuated around a relatively stable average of about 5.5 to 6 per cent. In Europe, by contrast, there has been a sharp upward trend in the underlying rate of unemployment over the past 40 years, which appears to have come to an end only quite recently. While in their detail labour market institutions in Europe have been changing all the time, it is hard to argue that these changes have been large relative to the differences between Europe and the United States. Many of the changes in any event may have reduced rather than increased the rigidities that might be associated with lower rather than higher unemployment.

Structural models at first sight appear to explain better the differences between countries than the evolution of aggregate unemployment over time. Starting with the innovative work of Calmfors and Driffill[104] and Layard et al.,[105] a number of studies (notably Elmeskov,[106] Bean,[107] Heylen et al.[108] and Jackman et al.[109]) have found fairly systematic links between aggregate unemployment (usually over say a five-year period) and structural factors. These studies have identified factors such as trade union membership, the degree of centralized bargaining and the level and duration of unemployment benefits as having a fairly systematic impact, while evidence on the effects of employment protection measures and of spending on active labour market seems more mixed.

These studies may nonetheless be criticized on the grounds that the number of countries under consideration is quite small (typically between 15 and 20) and the number of potential explanatory variables is enormous. It is further the case that some variables such as the degree of coordination in wage bargaining are measured somewhat subjectively, since the objective is to measure the "effectiveness" of coordination rather than a particular institutional structure.

The credibility of these studies is also undermined by the sharp changes in the unemployment rates of the countries relative to one another over the period, while institutional arrangements have by and large not changed. To some extent these international cross-section studies are "children of their time" in the sense that they describe and summarize empirical regularities that characterize a particular period rather than identifying the fundamental determinants of the unemployment rate.

These simple models are therefore not fully consistent with the broad facts of postwar European experience. The sustained very low rates of unemployment in the 1950s and 1960s, followed by the extremely high and persistent unemployment rates of the 1980s and early 1990s cannot be explained by demand shocks. They persist for too long for any normal model of the business cycle and do not accord with the behaviour of other labour market or macroeconomic indicators. Nor can the sudden shift from very low to very high unemployment be explained by labour market or institutional variables, as these hardly changed in many countries over the relevant time period.

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[103] M. Friedman, "The role of monetary policy", *American Economic Review*, Vol. 58, 1968, pp. 1-17.

[104] L. Calmfors and J. Driffill, "Centralization of wage bargaining and macroeconomic performance", *Economic Policy*, Vol. 6, 1988, pp. 13-61.

[105] R. Layard, S. Nickell and R. Jackman, *Unemployment: Macroeconomic Performance and the Labour Market* (Oxford, Oxford University Press, 1991).

[106] J. Elmeskov, *High and Persistent Unemployment: Assessment of the Problem and its Causes*, OECD Economics Department Working Papers, No. 132 (Paris), May 1993.

[107] C. Bean, "European unemployment: a survey", *Journal of Economic Literature*, Vol. 32, No. 2, 1994, pp. 573-619.

[108] F. Heylen, L. Goubert and E. Omey, "Unemployment in Europe: a problem of relative or aggregate demand for labour?", *International Labour Review*, Vol. 135, No. 1, 1996, pp. 17-36.

[109] R. Jackman, R. Layard and S. Nickell, "Combating unemployment: is flexibility enough?", *Macroeconomic Policies and Structural Reform* (Paris, OECD, 1996), pp. 19-58.

We proceed therefore to models developed to explain these broad facts.

(c) Hysteresis

Hysteresis is the idea that a system can be changed for a long time, perhaps even permanently, by the experience of a shock. By way of graphic illustration, Keynes gave the example of a storm at sea:[110] a ship is sunk in the storm, and its destruction and the deaths of the sailors are permanent, even though the storm itself is temporary. When the storm is over, the sea will be calm again but the ship will not return to the surface nor will its sailors be brought back to life. The disruptive effects of a shock, as in this case, can cause permanent damage, even though the determinants of the long-run equilibrium are unchanged. In the economic sphere, events such as bankruptcies, in which a previously viable firm closes down and its capital, workers and managers are dispersed, could be cited as a similar case.

The notion that the labour market might be subject to hysteresis was prompted by the persistence of very high rates of unemployment in many western economies in the 1980s. The idea is that the structure and institutions of labour markets do not of themselves cause high unemployment, but rather lock in high rates of unemployment caused by macroeconomic downturns, such as those caused by the OPEC shocks. This has led to a whole class of models in which the capacity of labour market institutions to enable the economy to adjust to shocks plays a critical role. Most, but not all, models of this category assume that hysteresis is partial, so that the effects of a shock may be prolonged but are not permanent.

The concept of hysteresis may be grafted onto either the simple Keynesian or the simple structural framework. In the structural case, for example, there will still exist a long-run equilibrium natural rate, but in the short run the equilibrium rate will be given by:

$$U_{SR} = \lambda u^* + (1-\lambda)u_{-1} \quad (3)$$

where u_{-1} is the unemployment rate in the previous period. Likewise in the Keynesian model previous period unemployment would be among the wage pressure variables:

$$P = P^e + f(z,u,u_{-1}) \quad (4)$$

with $\partial f/\partial u_{-1}>0$, so that the higher is past unemployment the higher current unemployment needs to be to achieve any given effect on wage pressure.

In either case, should there be a sharp rise in unemployment following some shock, the equilibrium, or non-inflationary, rate of unemployment will rise and thereafter decline slowly back to its long-run equilibrium. The rate of decline is described by the parameter λ (in equation (3), or on the value of f_2/f_1 (in equation (4)).

Thus formalized, hysteresis models have the property that a sharp increase in unemployment, such as that which followed the oil market shocks and the monetary deflation of the 1970s and early 1980s, would persist for some years thereafter. How many years would depend on the factors characterizing the speed of adjustment, and these factors in turn are held to depend on various labour market or other institutions. In these models, structural variables may thus in principle affect not only the equilibrium rate of unemployment but also the speed with which the economy adjusts to shocks, and any cross-section correlation between unemployment and these structural variables would represent a snapshot at a particular stage in the adjustment process, rather than a long-run equilibrium.

Clearly, hysteresis models, which explain unemployment in terms of the interaction of shocks and labour market institutions, are attractive in a number of respects. In particular (i) they allow movements in aggregate unemployment over time to be explained largely by shocks that have high variance themselves, rather than by structural factors, which tend to be relatively static and (ii) they are consistent with explanations of the cross-section variation across countries at a point in time which rest largely on structural factors. Further, to the extent that either the impact of shocks or the speed of adjustment depend on institutional factors, they also (iii) imply that such cross-section relationships will not be stable over time.

Hysteresis models need first to identify a mechanism generating slow adjustment. A number of studies in the early 1980s were concerned with the causes of cross-country variation in various nominal rigidities.[111] Economists at this time were particularly struck by the observation that unemployment rates in the Scandinavian countries had remained remarkably low throughout the 1970s and early 1980s. The explanation offered was that the institution of centralized wage bargaining enabled wages to be set in awareness of the economic consequences of the oil price increase, while in other countries with decentralized bargaining, wages were still set by reference to targets for real wage growth. Such targets were no longer attainable, but the attempt to achieve them imparted an inflationary bias to wage demands, which in turn had to be offset by higher unemployment. But the experience of the 1980s suggested that persistently high rates of unemployment coexisted with stable inflation, and the term hysteresis then came to be associated with real rather than nominal rigidities. Although various ideas were explored two dominant themes emerged.

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[110] J. Keynes, *Tract on Monetary Reform* (London, Macmillan, 1920).

[111] For example, M. Bruno and J. Sachs, *Economics of Worldwide Stagflation* (Oxford, Basil Blackwell, 1985) and D. Grubb, R. Jackman and R. Layard, "Wage rigidity and unemployment in OECD countries", *European Economic Review*, Vol. 21, 1983, pp. 11-39.

The first was that in economies where wages were set by trade unions, only the interests of currently employed union members would be taken into account in wage determination. Thus if an adverse shock led to reduced employment, those who lost their jobs would also lose their union representation. Wages would be set to maximize the welfare of those remaining in work and not with regard to the job prospects of those currently unemployed. In an early model of this type, Blanchard and Summers[112] demonstrated that employment would then follow a random walk with no reference to the unemployment rate. The basic idea, however, was developed extensively by Lindbeck and Snower under the name of the "insider-outsider" model.[113]

I will argue below that the "insider-outsider" insight is important in understanding the development of labour market institutions. However, its particular manifestation in terms of wage-setting seems unconvincing. The objection to the model in the context of wage-setting is that by and large both theory and evidence suggest that in wage-setting unions are simply concerned with achieving the highest wage they can, and take no specific interest in employment in reaching the wage bargain. The reason is that in most sectors there are reasonably high rates of labour turnover. Thus, even if a union were able to secure a wage increase which led the employer to wish to reduce employment, such a reduction could be achieved by lowering recruitment and allowing the adjustment to take place through voluntary quits and retirements ("natural wastage"). Wage increases are limited by what employers are prepared to pay, not by union fears of job losses. Hence, unions will not cease to press for higher wages simply because current employment is lower.

The second main theme came to prominence with the work of Layard and Nickell on the United Kingdom economy during the 1980s and focused on long-term unemployment.[114] The basic notion was that, as unemployment rose, there would be an increase in the number of people experiencing a long duration of unemployment, and that long spells of unemployment could discourage job search, weaken motivation and be associated with a depreciation of skills. Employers might then be reluctant to hire long-term unemployed people, so that people with long unemployment spells would to some extent fade out of the labour force.

Long-term unemployment causes hysteresis to the extent that people are scarred by the experience, but conclusive evidence on this has been hard to pin down. It is well known that outflow rates from unemployment decline with duration, but it is difficult to establish whether this result derives from heterogeneity or from a direct causal impact of the length of an unemployment spell on the chance of finding a job. However, more recent work using longitudinal data finds significant evidence of long-term scarring.[115]

While the rise in unemployment following the OPEC shocks of the 1970s was evidently the sharpest disruption faced by the economies of western Europe in the postwar period, it is by no means the only shock to have occurred. Other major shocks include the downturn in productivity growth, also from the 1970s,[116] and the sharp rise in real interest rates throughout the world in the 1980s.[117] Using a general framework to allow for the effects of any such shocks, Blanchard and Wolfers[118] estimated a fixed effects model in which the structural variables interact with the aggregate level of unemployment. In their formulation, when aggregate unemployment is high structural variables have a large role in explaining the differences in unemployment across countries, while when aggregate unemployment is low the impact of such factors is much less.

The results in the Blanchard and Wolfers paper are in line with previous studies and may be taken as representative. They find first that both the unemployment benefit replacement rate and the duration of unemployment benefits prolong adjustment. These variables are associated with a tendency to long-term unemployment. They also find employment protection measures slow down adjustment, as do high taxes, while active labour market policies speed it up. Finally, they find that union membership slows down adjustment, while coordinated wage bargaining speeds it up. These variables link up with the role of long-term unemployment or that of insiders in wage bargaining. Blanchard and Wolfers also investigate whether the country fixed effects in their estimation can be explained by the same set of structural variables but are unable to identify any statistically significant results. They suggest that this implies that such structural variables matter only because they affect adjustment speeds, and not the long-run equilibrium, although this is an issue which needs further research.

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[112] O. Blanchard and L. Summers, "Hysteresis and the European unemployment problem", in S. Fischer (ed.), *NBER Macroeconomics Annual* (Cambridge, MA, MIT Press, 1986), pp. 15-77.

[113] A. Lindbeck and D. Snower, *The Insider-Outsider Theory of Employment and Unemployment* (Cambridge, MA, MIT Press, 1988).

[114] R. Layard and S. Nickell, "Unemployment in Britain", *Economica*, Vol. 53, 1986, pp. S121-169.

[115] P. Gregg, "The impact of youth unemployment on adult unemployment in the NCDS", *Economic Journal*, Vol. 111, 2001, pp. F626-653.

[116] D. Grubb, R. Jackman and R Layard, "Causes of the current stagflation", *Review of Economic Studies*, Vol. 49, 1982, pp. 707-730.

[117] E. Phelps, *Structural Slumps. The Modern Equilibrium Theory of Unemployment, Interest and Assets* (Cambridge, MA, Harvard University Press, 1994).

[118] O. Blanchard and J. Wolfers, "The role of shocks and institutions in the rise of European unemployment: the aggregate evidence", *Economic Journal*, Conference Papers, March 2000, pp. C1-33.

(d) *Interactive models*

These models are static in character, but assume that the economy is hit by some permanent shock the impact of which depends on the economic structure. The best known of these is the technology shift hypothesis, which argues that the impact of recent technological advances, particularly in the spheres of computers and information technology, has been to raise the demand for skilled at the expense of unskilled labour. This hypothesis was originally advanced to explain the increase in wage dispersion in the United States economy. This idea was then extended to argue that in economies where greater wage inequality was obstructed by financial provisions such as unemployment benefits, or legal measures such as minimum wage laws, or institutions such as egalitarian trade unions, the reduced demand for unskilled labour would create unemployment. Thus, for example, in a vivid presentation of this thesis, Krugman suggested that "growing United States inequality and growing European unemployment are different sides of the same coin".[119] Krugman argues that the shift in demand towards more highly-skilled labour has created persistent unemployment in countries where relative wages have not been able to adjust. To put matters another way, a set of institutions and policies which function effectively in one economic environment may be dysfunctional in another and in fact lead to high equilibrium unemployment.

While to some extent plausible, the technology explanation has run up against the difficulty that there is no evidence that higher levels of unemployment in Europe are concentrated among the unskilled. Of course, it is always the case that the unemployment rates of unskilled workers are higher, but both aggregate analysis[120] and microeconomic studies[121] fail to detect any differential shift in excess demand. One explanation may be that many European countries gave high priority to improvements in secondary and post-compulsory education, so that the increased demand for more skilled workers was matched by an increased supply. This would in turn imply that the observed stability of the wage distribution reflected not so much institutional resistance to any change in relative wages as an absence of market pressure for change in the first place.

Of course, there have been many changes in the labour markets of the European countries over the past 40 years, and in some respects demographic changes have been even more dramatic than technological advances. Labour force participation rates have risen strongly in most countries and there is much evidence that participation can affect unemployment. The main underlying cause of increased labour force participation has been the huge increase in female participation, and, as already noted, this change perhaps has dominated labour market developments in many countries.

A second demographic change of immense importance has been the reduction in the mortality rate. In the early years of this century, improvements in living standards and in public health greatly reduced infant mortality rates. These, together with the associated reduction in the birth rate, led to a substantial improvement in women's health and, after a time, to an increase in female labour force participation. However, in recent years, improvements in health care have primarily reduced the mortality of older people. This has led to a sharp growth in the proportion of retired people in the population with obvious adverse implications for the dependency ratio. An increase in the proportion of old people in most European countries has severe fiscal implications, and in general necessitates an increased tax burden on those in work.

The argument of this paper is that these demographic changes as much as advances in technology are critical to understanding labour market developments of the postwar period.

(ii) The participation rate and the employment to population ratio

Chart 2.3.1 shows the major developments in the participation rate, both in the United States and in Europe. There is a pronounced upward trend in the female participation rate in both cases. In contrast the male participation rate shows some tendency to decline. For both men and women participation is much higher in the United States than in Europe. Causes of the differences in participation rates across countries have not been as intensively investigated as with unemployment, although some cross-section econometrics have been undertaken.[122] Table 2.2.1 gives participation rates for individual countries both in aggregate and separately for men and women.

As already noted in relation to the comparison between Europe and the United States, the main cause of the differences in the employment/population ratio across countries is the variation in participation rates. There is a clear tendency in the data for countries with lower participation rates to have higher unemployment rates

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[119] P. Krugman, "Past and prospective causes of high unemployment", *Reducing Unemployment: Current Issues and Policy Options*, Federal Reserve Bank of Kansas City, 1994, pp. 49-80.

[120] F. Heylen, L. Goubert and E. Omey, op. cit.; R. Jackman, R. Layard, M. Manacorda and B. Petrongolo, *European Versus US Unemployment: Different Responses to Increased Demand for Skill?*, Centre for Economic Performance, Discussion Paper No. 349 (London), June 1997, and printed in R. Layard (ed.), *Tackling Unemployment* (London, Macmillan, 1999).

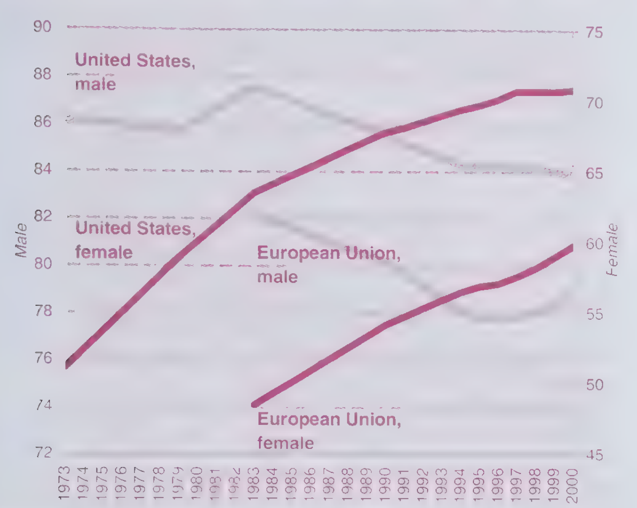
[121] A. Krueger and J. Pischke, *Observations and Conjectures on the US Employment Miracle*, NBER Working Paper, No. 6146 (Cambridge, MA), August 1997.

[122] S. Nickell and R. Layard, "Labour market institutions and economic performance", in O. Ashenfelter and D. Card (eds.), *Handbook on Labour Economics*, Vol. 3C, 1999; "The cross-market effects of product and labour market policies", *OECD Economic Outlook* (Paris), December 2001, chap. VI (especially table VI.I).

CHART 2.3.1

Labour force participation rates in the United States and the European Union, 1973-2000

(Per cent)



Source: OECD, *Employment Outlook 1992, 1999-2001* (Paris).

Note: Partly interpolated.

(although there is no necessary reason why this should be so, and we return to this below). As already noted in chart 2.2.4, a plot of unemployment rates against participation rates displays a clear negative correlation. The slope coefficient suggests that an increase in unemployment of 1 percentage point tends to be associated with a 3 percentage point reduction in participation. This means that roughly speaking three quarters of the variation in the employment/population ratio can be explained in terms of variation in the participation rate and only one quarter as a result of variation in unemployment.

It is clear that the immediate cause of these differences lies in the participation of women. Male participation rates cluster in the 75 to 85 per cent range across the OECD countries, with the European average (at 78.9 per cent) only around 5 percentage points lower than the figure for the United States (83.9 per cent). In contrast female participation rates range from around 50 per cent in Greece and Spain to more than 75 per cent in Denmark, Norway and Sweden. The female participation rate in the United States is 10 percentage points higher than in Europe (70.8 per cent as against 59.8 per cent). The gap between male and female participation rates ranges from a low of less than 5 per cent in Finland and Sweden to close on 30 per cent in Greece, Italy and Spain. It is natural therefore to think that these differences reflect differences in social traditions and social structures and simply embody the different preferences over the "household allocation of time" that result from them. Two pieces of evidence suggest however that the reality is more complex.

First, if one disaggregates participation rates by age, the evidence for different age groups is quite different.

TABLE 2.3.1

Labour market participation, adult workers aged 25-54, 2000

(Per cent)

	Employment/ population ratios		*Unemployment rate*		*Participation rate*	
	Men	*Women*	*Men*	*Women*	*Men*	*Women*
Europe						
Austria	89.7	73.5	4.2	4.4	93.6	76.8
Belgium	87.9	67.8	4.6	7.4	92.1	73.2
Denmark	88.3	80.4	3.5	4.7	91.5	84.3
Finland	84.1	77.6	7.2	8.8	90.8	85.0
France	87.0	69.6	7.6	11.1	94.1	78.4
Germany	89.4	70.8	6.7	8.0	95.8	76.9
Greece	88.6	52.6	6.1	14.7	94.3	61.7
Ireland	88.1	62.7	4.3	3.6	92.0	65.0
Italy	84.6	50.7	6.4	12.5	90.4	57.9
Netherlands	92.2	70.9	1.7	3.0	93.8	73.0
Norway	88.7	81.6	2.9	2.3	91.4	83.6
Portugal	90.2	73.9	2.7	4.1	92.7	77.1
Spain	85.4	50.7	7.9	18.7	92.8	62.4
Sweden	85.8	81.7	5.2	4.6	90.6	85.6
Switzerland	95.2	75.6	1.6	3.1	96.7	78.0
United Kingdom	87.5	73.1	4.8	4.0	91.9	76.1
European Union	87.5	65.7	6.1	8.9	93.1	72.2
Other OECD countries						
United States	89.0	74.3	2.9	3.3	91.6	76.8
Japan	93.5	63.6	3.9	4.4	97.1	66.5
Australia	85.6	67.4	5.2	4.6	90.3	70.7
Canada	85.9	74.0	5.7	5.8	91.1	78.6
New Zealand	87.3	70.3	4.4	4.6	91.3	73.8
Republic of Korea	88.0	56.3	4.3	2.7	92.0	57.8

Source: OECD, *Economic Outlook* (Paris), 2001, table C.

Table 2.3.1 sets out the employment/population ratios, unemployment rates and participation rates of "prime-age" adult workers (age 25-54) for men and women. There is a remarkable closeness in the employment/population ratios of prime-age men in all countries, notwithstanding the very considerable differences in other labour market indicators. Participation rates are also very similar for this group across all countries and the variation in unemployment rates is quite limited. In all these measures, the variation across countries is much greater for women than for men. In particular, in the low unemployment countries the unemployment rates of adult men and women are much the same, but in countries where unemployment is high, such as Greece, Italy or Spain, the unemployment rate of women is very much higher than that of men. Indeed, it is sometimes argued that the European unemployment problem is less severe than appears at first sight, because the unemployment rates of "primary workers" (identified as prime-age men) is lower than the aggregate unemployment rate.

There are in contrast remarkably large disparities across countries in the employment/population ratios for young people age 15-24 (table 2.3.2). In France, only 23 per cent of people aged 15-24 have a job as against 68 per cent in the Netherlands or 67 per cent in Denmark. These differences across neighbouring economies seem

TABLE 2.3.2

Youth employment rates, persons aged 15-24, 2000

(Per cent, birth rate per 1000)

	Employment/ population ratios			Education enrolment [a]	Birth rate per 1000 [b]	Unemployment rate
	All	*Men*	*Women*			
Europe						
Austria	52.5	56.5	48.6	45.6	10.9	4.7
Belgium	30.3	33.7	26.7	55.1	11.4	6.6
Denmark	67.1	70.3	64.0	51.7	13.4	4.5
Finland	39.8	39.8	39.9	56.7	12.4	9.9
France	23.3	26.7	20.0	51.2	12.5	10.1
Germany	48.4	52.5	44.2	53.3	9.3	8.1
Greece	26.9	31.9	22.0	47.4	9.8	11.3
Ireland	48.2	52.7	43.7	45.9	13.4	4.4
Italy	26.1	30.2	22.0	42.1	9.2	11.0
Netherlands	68.4	69.9	66.7	52.7	12.3	2.7
Norway	57.7	60.2	55.0	54.1	13.8	3.5
Portugal	41.9	47.7	36.1	45.8	10.7	4.1
Spain	35.9	42.8	28.7	47.6	9.1	14.1
Sweden	46.1	46.7	45.4	56.6	11.7	5.9
Switzerland	65.0	66.5	63.4	49.2	11.6	2.7
United Kingdom	61.5	63.9	58.9	45.7	12.9	5.6
European Union	40.8	44.8	36.7	–	–	6.3
Other OECD countries						
United States	59.8	62.0	57.6	47.2	15.3	4.0
Japan	42.7	42.5	43.0	–	9.9	5.0
Australia	60.5	60.6	60.4	51.1	14.5	6.3
Canada	56.3	56.7	55.8	45.8	13.2	6.9
New Zealand	54.7	56.6	52.7	44.4	16.3	6.1
Republic of Korea	28.5	23.3	33.1	49.4	–	4.2

Source: OECD, *Employment Outlook* (Paris), 2001, table C; OECD, *Education at a Glance* (Paris), 2001, table C1.2; United Nations, *Demographic Yearbook* (New York), 1995, table 4.

[a] 1999.

[b] 1995.

TABLE 2.3.3

Employment ratios for older people aged 55-64, 2000

(Per cent, life expectancy in years)

	Employment/population ratios			Life expectancy		Unemployment rate [a]
	All	*Men*	*Women*	*Men*	*Women*	
Europe						
Austria	29.2	41.4	17.8	73.3	79.7	..
Belgium	25.0	35.1	15.4	72.4	79.1	7.8
Denmark	54.6	61.9	46.2	72.5	77.8	..
Finland	42.3	43.7	40.9	72.8	80.2	13.0
France	34.2	38.4	30.2	72.9	81.2	10.2
Germany	38.6	48.2	29.0	72.8	79.3	4.8
Greece	39.0	55.3	24.4	74.6	80.0	..
Ireland	45.2	63.0	27.1	72.3	77.9	16.1
Italy	27.3	40.3	15.2	73.8	80.4	10.5
Netherlands	37.9	49.9	25.8	74.2	80.2	6.8
Norway	67.1	73.1	61.2	74.2	80.3	5.9
Portugal	51.7	62.5	42.3	71.2	78.2	4.1
Spain	36.8	55.0	20.1	73.4	80.5	18.1
Sweden	65.1	67.8	62.5	76.1	81.4	4.8
Switzerland	70.0	77.0	60.8	75.1	81.6	..
United Kingdom	50.5	59.8	41.4	74.2	79.4	9.9
European Union	38.5	48.9	28.4	..	..	..
Other OECD countries						
United States	57.7	65.6	50.5	72.2	78.8	7.3
Japan	62.7	78.4	47.8	76.6	83.0	2.2
Australia	47.1	58.5	35.4	75.0	80.9	10.7
Canada	48.4	57.7	39.3	73.0	79.8	11.2
New Zealand	57.2	68.3	46.3	72.9	78.7	10.3
Republic of Korea	57.6	68.2	47.5	..	..	..

Source: OECD, *Employment Outlook* (Paris), 2001, table C and 1993, table K; United Nations, *Demographic Yearbook* (New York), 1995, table 4.

[a] 1992.

extraordinarily large. Of course, many young people are not in work because they are in school or college. However, the figures for educational enrolment given in column 5 of table 2.3.2 suggest the variation in this factor across countries is not enormous or able to account for any part of the differences in employment. For example, Denmark and the Netherlands both have higher educational enrolment rates than does France. (In some countries, the employment/population ratio and the education enrolment rate add up to more than one, presumably because some young people both work and attend a school or college within a given period, and are counted in both categories.)

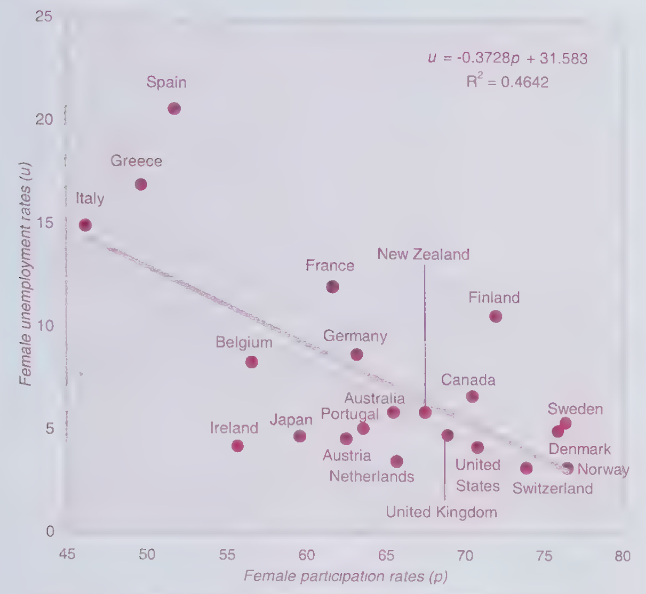
One may further note that although in nearly all countries the employment/population ratios of young women are lower than for young men, the differences are generally not great and do not play an important part in explaining the differences across countries in youth employment. It is also the case that educational enrolment rates for men and women are now fairly similar in most OECD countries. Differences in employment/population ratios for young people cannot be explained in terms of traditional social structures affecting the role of women in the labour market. This is to some extent confirmed by evidence on birth ràtes (table 2.3.2, column 6), which shows that birth rates tend if anything to be lower in countries where the employment rates of young women are low.

The large differences across countries in the proportion of young people employed may be more plausibly explained by factors on the demand side. Young people typically are less skilled and experienced and earn lower wages than adult workers, and the profitability of employing them is therefore more sensitive to non-wage labour costs as well as to institutional rigidities such as minimum wage requirements. Such factors would affect both men and women and are known to be particularly prevalent in countries such as France and Italy where the youth employment proportion is particularly low.

Finally, the proportion of older workers in employment also varies very markedly across countries (table 2.3.3). The labour force participation of older people and in particular of older men has declined quite significantly in recent years, but the variation across countries seems extraordinarily large, from 70 per cent in Switzerland to only 25 per cent in Belgium. While there

CHART 2.3.2

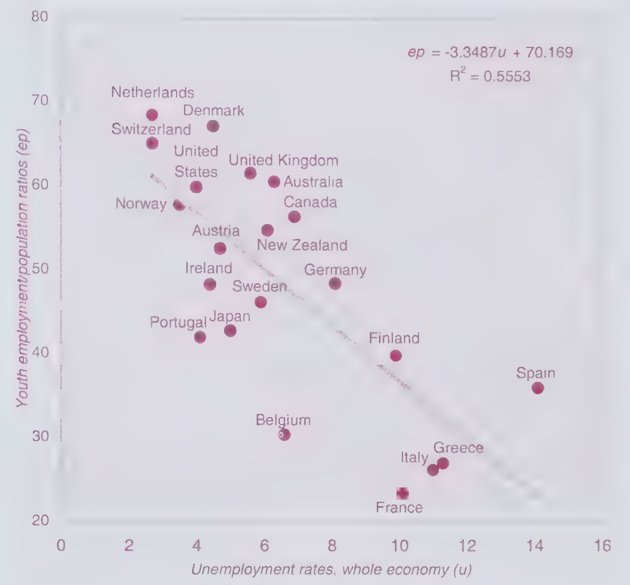
Female unemployment versus participation in 2000
(Per cent)



Source: As for chart 2.2.4.

CHART 2.3.3

Employment/population ratios versus unemployment rates for youth aged 15-24 in 2000
(Per cent)



Source: As for chart 2.2.4.

is a gap between the employment proportions of men and women, as with young people, the more remarkable observation is the difference across countries, which cannot be accounted for by this factor. Further, variations between countries in the health of older people cannot explain any part of these differences. As shown in table 2.3.3, columns 5 and 6, life expectancy, which may be taken as a summary measure of health conditions, is very similar in all OECD countries. As with young people, it seems that a more plausible explanation may be found on the demand side. In particular, the extent to which countries resorted to early retirement schemes during the years of high unemployment, and that such schemes continue to influence retirement behaviour, seems the biggest influence on whether older people remain employed or drop out of the labour force.

In summary, a substantial part of the variation across countries in the employment/population ratio has to do with the employment rates of people below the age of 25 and those aged over 55. Neither of these differences can be explained very easily in terms of social customs or differences in preferences concerning the division of labour within the household.

Second, as already noted, there is a clear relationship between the participation rate and the unemployment rate. While there are various possible explanations for this, the leading one must be some form of the "discouraged worker" effect, according to which it is in part a lack of job opportunities that leads workers to leave the labour force. Charts 2.3.2-2.3.4 plot the relationship across countries of unemployment with the female participation rate, with the youth employment proportion and with the employment of older people. In each case there is a clear negative correlation, again suggesting that an important common factor accounting for the low employment of these groups is a lack of job opportunities.

A lack of job opportunities does not of course equate to a deficiency of aggregate demand. As with the theories of unemployment, the more likely medium-term explanation concerns structural impediments to job creation. To take a very obvious example, minimum wage laws may discourage employers from hiring unskilled workers whose productivity may be low. Trade unions may resist changes in production technologies which might replace production by service jobs. High taxes may price some types of job out of existence, or heavy overhead costs may discourage the creation of part-time work. To the extent that these jobs might often be taken up by secondary workers and that such workers may drop out of the labour force rather than count themselves as unemployed, these factors may therefore explain low participation as much as higher unemployment. Their economic costs then go beyond their effects on measured unemployment.

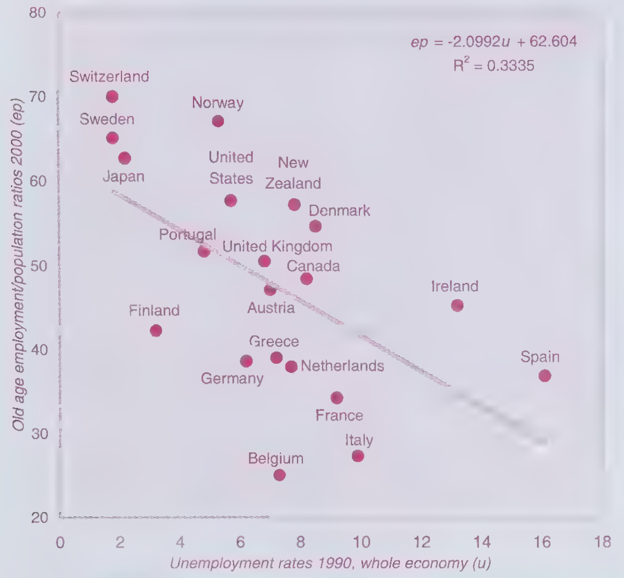
(iii) Some aspects of demographic change

(a) The female participation rate

A broad-brush comparison of European and United States labour markets cannot escape the most remarkable change over the period, namely the extraordinary increase in the female participation rate. In 1960, the labour force

CHART 2.3.4

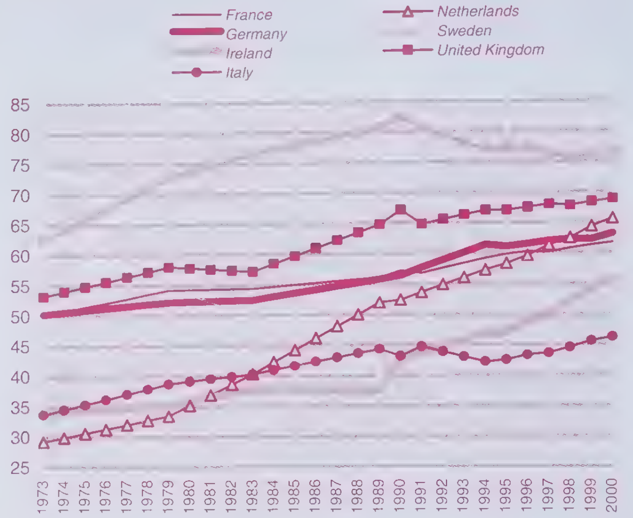
Employment/population ratios 2000 versus unemployment rates 1990 for older persons aged 55-64
(Per cent)



Source: As for chart 2.2.4.

CHART 2.3.5

Female labour force participation rates, 1973-2000
(Per cent)



Source: As for chart 2.3.1.

Note: Partly interpolated.

participation rates in the United States were twice as high for men as for women (84 per cent as against 37.7 per cent), while by 1997 the gap had narrowed to only 15 percentage points (75 per cent to 59.8 per cent). In Europe between 1973 and 1991, the participation rate of men fell from 88.7 per cent to 78.3 per cent, while for women it rose from 44.7 per cent to 54 per cent.

As with unemployment, it is important also to recognize that the experiences of European countries have been far from uniform. Thirty years ago, as shown in chart 2.3.5, the participation rate varied from 60 per cent in Sweden, to around only 30 per cent in the Netherlands. Since then, while there has been a tendency for the rate to rise in most countries, the increase has been very sharp in Ireland and in the Netherlands, and much smaller in France and Germany.

The increase in the number of women in the labour force in most European countries clearly reflects a very fundamental change in society, and it is important to recognize the main factors behind this change. There are both supply-side and demand-side influences at work.[123] On the supply side, the most important exogenous factors have been the reduction in the birth rate, the introduction of various labour-saving devices that have reduced the time needed for housework and changes in the working conditions of paid employment, which have made employment more attractive to women. There have also been changes in social attitudes concerning women at work, but it is not clear whether these have constituted an independent factor or have simply taken the form of an adjustment to a changing situation.

Insofar as these supply-side changes are exogenous, and to the extent that men and women are not perfect substitutes as employees, it might be expected that an increase in the relative supply of women workers would lead to a reduction in the relative wage of women. This has not happened; there has if anything been a tendency for women's wages to increase relative to those of men.[124] The simultaneous increase in relative employment and relative wage can be explained by several factors. There has been a shift in the composition of the demand for labour to activities such as service and public sector work where women are at an advantage. There has been a marked improvement in the access of women to education resulting in a significant improvement in the education levels and other qualifications of women. In some countries there has also been a breakdown of various customs according to which particular types of jobs were assumed to be reserved for men.

Thus it could be claimed that, as a result of economic changes over the last 50 years or so, there has been both an increase in the supply of women wanting to work and an increase in the demand for their services as employees. Insofar as these economic changes have been exogenous, the factors responsible for them have been largely common or shared across countries, rather than being specific to individual countries. But this then raises the question why, if the exogenous changes have been common, the impact on female participation has been so different.

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[123] D. Costa, "From mill town to board room: the rise of women's paid labor", *Journal of Economic Perspectives*, Vol. 14, No. 4, Fall 2000, pp. 101-122.

[124] F. Blau and L. Kahn, "Gender differences in pay", *Journal of Economic Perspectives*, Vol. 14, No. 4, 2000, pp. 75-99.

The likely reason for this may again be found in the differences in labour market institutions. The rise in female participation in the Netherlands for example may be traced back to the deliberate decision in the early 1980s as part of the Wassenaar agreement (see below) to remove impediments to part-time work, and to encourage employers to provide part-time work.[125] This decision and the response to it indicate that in the Netherlands the reason for low female participation was a structure of institutions preventing the labour market from providing women with the type of work they wanted. There seems no reason to think that the Netherlands is unique in this respect.

There is perhaps a critical divergence between labour market policies whose emphasis has been on the protection of existing jobs and the standards of living of the workers holding them, and policies attempting to stimulate new job creation. The first type of policy may well be consistent with low unemployment in a static environment. The protection of existing jobs and the improvements in working conditions will lead to stable employment relationships.

(b) The increase in life expectancy

Life expectancy has been rising steadily in developed countries over the last 200 years, but until recently much of the increase took the form of reduced infant and child mortality and an increase in the proportion of the population reaching retirement age. Such developments lead to increased survival in all age groups and hence do not significantly alter the balance between the proportion of the population of working age and the proportion of dependants (children and the elderly). In the last 20 years, however, the increase in life expectancy has largely taken the form of an increase in the life expectancy of those reaching retirement age. This means that the proportion of old people in the population has been increasing and is projected to increase – in some countries very sharply – over the next 30-50 years.

The impact of the increase in the number of elderly people on the labour market arises from its impact on public expenditure. For many western European countries, pensions are the largest and most rapidly growing element of public expenditure and there is sometimes talk of a pensions "time bomb" in public expenditure projections. Further, it is well known that health care expenditure per head on elderly people is much higher than for adults of working age. It seems inevitable that at least in the medium term the bulk of such costs will have to be borne by public expenditure supported from the taxation of those in work. Evidently the tax burden of supporting the elderly can to some extent be lightened by increasing the number of people in work, and thus the tax base. This may include increasing the proportion of people approaching or past retirement age who remain in work. An increase in the age at which workers become entitled to publicly-funded pensions has the double benefit of increasing the tax base while reducing expenditure commitments. These considerations suggest that labour market policies will need to aim at increasing labour force participation, rather than be concerned only with reducing unemployment.

2.4 Policies

The sharp rise in unemployment in the 1970s was accompanied by an even sharper rise in inflation, a phenomenon at the time termed "stagflation". This combination was clearly unprecedented and there was neither theoretical guidance nor experience to guide policy. Given that there had been no seismic shocks in the structure of the labour market it was not unreasonable that there was a hope that unemployment could be brought down to pre-shock levels by expansionary demand policies, while inflation could be attacked in other ways. But attempts at macroeconomic expansion in the 1970s appeared only to reignite inflationary pressures, and it soon became the prevailing economic orthodoxy that sustainable reduction in unemployment could be achieved only by "real" or structural policies, which affected the determinants of the equilibrium unemployment rate.

(i) Wage-setting and the role of the trade unions

Given the critical role of trade unions in wage-setting in the simple Keynesian model, and the consistent finding of a positive correlation between union membership (or coverage) and unemployment in numerous empirical studies, it is not surprising that trying to influence union wage-setting has been a major preoccupation of policy makers in Europe. Broadly speaking, there have been two different approaches over the last 20 years. First have been policies, attempted with some success in the United Kingdom but not widely in Europe, to weaken the power of unions. The alternative approach has been to involve unions in a collective way in economic policy. This second approach has been an important element in the successful transition to lower rates of unemployment in some smaller economies such as Ireland or the Netherlands.

The United Kingdom experience is particularly important in this context. In the United Kingdom, for various historical reasons, the unions were powerful within the workplace but did not see their domain of responsibility as extending beyond that. During the 1960s Britain had a large and powerful union movement. But unlike many other countries, particularly in continental Europe, the unions were not supported either by legislation or by special institutional arrangements such as the role given to the "Social Partners". Instead the unions used to operate to a large extent outside the law, being freed from liability from normal civil law damages by the Trades Disputes Act of 1906, but not governed by any other legislation. And while they had no formal role in government, their close association with the Labour party, which they largely financed, gave them a powerful if formally unaccountable position in the centre of the political system. During the 1960s and 1970s when Labour was in power this placed them at the centre of government.

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[125] S. Nickell and J. van Ours, "The Netherlands and the United Kingdom: a European employment miracle?", *Economic Policy*, Vol. 30, April 2000, pp. 135-180.

In economic terms, the unions played a central role in the evolution of inflation and unemployment in the United Kingdom economy. The presence of powerful and decentralized unions gave each an incentive to bargain for higher money wages to improve its members' living standards. The upward pressure on money wages led to job losses and confronted governments with the dilemma of allowing unemployment to rise or else accommodating the wage inflation by higher aggregate demand. During the 1950s and 1960s, when the exchange rate was fixed, this led to balance of payments crises. These were countered initially by a deflationary reversal of demand ("stop-go"), but by the second half of the 1960s by devaluation. By the 1970s the exchange rate was floating and wage inflation could be directly accommodated by price inflation.

Of course governments were aware of these dangers and attempted to forestall them by encouraging the unions to restrain their wage demands through various forms of incomes policies. But in the British context these were doomed to failure because of the decentralized nature of the union movement. Even if union leaders could be made to sign up to the policies there was no way of enforcing them on their members. There were times when incomes policies were conspicuously successful, for example the £6 a week limit introduced in 1975 after inflation had reached 25 per cent after the first oil price shock. But generally they either failed to have any effect, or their effects were soon reversed after they had come to an end. Most conspicuously, the attempts of the Labour government in 1978/79 to pull down inflation through limiting wage increases led to a series of public sector strikes ("the winter of discontent"), which precipitated the election of the Thatcher government in the spring of 1979.

The new government's strategy may be seen in retrospect as having two components. First, to set its face against any accommodation of wage increases, and let unions confront the consequences of their wage claims for jobs irrespective of the economic costs. This arm of the strategy led to a sharp recession and a very rapid rise in unemployment in the early 1980s. The second component of the strategy was to introduce the law gradually into governing the conduct of union activities. The Thatcher government did not remove the unions' legal immunities but it restricted their scope in ways which gradually undermined the power of the unions. For example, for a strike to be official, a union had first to obtain the support of a majority of its members in a ballot, and second to give seven days' notice. Although unofficial strikes were not made illegal, legislation on unfair dismissal was revised in such a way that employers were allowed to dismiss employees involved in unofficial strikes. The forms strike action could take were also restricted: for example, secondary picketing became illegal, and legislation was introduced to ensure picketing was non-violent and not intimidating. Likewise, legislation has ended the closed shop; that is the arrangement whereby all employees in a firm or plant were required to join the union. All these measures have significantly eroded the power of unions in the United Kingdom at the level of the firm. They have introduced more of a balance of legal responsibilities where the firm's many and various duties towards its employees are balanced by corresponding duties and responsibilities of unions.

The other unusual feature of British industrial relations has been the role of the public sector. Strikes in the public sector tend to be highly publicized and highly political. They are a matter of immediate public concern because the public services affect everyone and there are no immediate substitutes; and, despite any protestations concerning the autonomy of the management of nationalized industries or local authorities, the government is seen to be the paymaster and to have ultimate responsibility. The tendency of the government to give in to public sector strikes had to some extent set the pattern for the nation's employers. (It could almost be argued that the private sector was fairly irrelevant in the inflation/unemployment trade-off.) The traumatic effects of the national coal strike in the winter of 1973/74, which had forced the introduction of the three-day working week, led to the election defeat of the then Conservative government in February 1974. The unions became politically unpopular especially during the local authority workers' strikes in the winter of 1978/79.

In terms of political influence, the decisive turning point was the miners' strike of 1984. The Thatcher government again showed unprecedented resilience in the face of the concerted attack of workers in a major nationalized industry, and the collapse of the miners' strike radically changed the attitudes of workers and unions towards the effectiveness of strikes. By the mid-1980s, the union movement was essentially crushed.

The alternative approach is to involve the union movement in implementing wage moderation. Such an approach takes its inspiration from the successes of the Scandinavian economies in maintaining low rates of unemployment throughout the 1970s in response to the OPEC shocks. This outcome was attributed to the recognition by the unions that oil price increases would inevitably lead to lower real wages and that to attempt to counter such losses by higher nominal wage demands would create inflation and reduce competitiveness. However, the process of wage bargaining in other smaller economies such as the Netherlands had not led to this happy outcome. The Netherlands suffered high unemployment in the 1970s. The unions were prepared to recognize that their approach needed to be reconsidered and reached a new agreement with the employers in 1982 (the "Wassenaar Agreement"). This provided a framework for economic policy, not wholly unlike the Medium-Term Financial Strategy introduced in the United Kingdom two years earlier, but stressing also the need for wage moderation to be achieved through the agreement of workers and employers. Very importantly for what follows, the Agreement also entailed opening up the Netherlands labour market and eliminating various restrictive practices affecting in particular part-time employment.

The Wassenaar Agreement enabled the Netherlands both to sustain existing markets and at the same time to accommodate the increase in labour supply resulting from higher female participation. Nickell and van Ours[126] conclude that changes in wage bargaining institutions constitute the main force leading to reduced equilibrium unemployment in both the Netherlands and in the United Kingdom, but the nature of the change is opposite in the two countries. In the Netherlands it is attributed to improved union coordination following the Wassenaar Agreement, while in the United Kingdom it is primarily attributable to the fall in union membership and in the proportion of workers covered by collective bargaining following the Thatcher reforms.

(ii) Unemployment benefits and active labour market policies

Concern over unemployment benefits arises for two reasons. First, in many models of wage-setting, unemployment benefits create a floor below which wages cannot fall and if this floor is high relative to the productivity of low-skilled workers, benefits may have the effect of raising wages above market-clearing levels and thus creating unemployment. But a second reason is that benefits may affect the behaviour of the unemployed and in particular their intensity of job search and how selective they are over the jobs they are willing to accept. There is fairly consistent evidence that higher levels of benefits are associated with higher unemployment and in particular that countries with long duration of benefit entitlement tend to have longer durations of unemployment.

Despite these findings few countries have made reducing the levels or duration of benefits a major element of policy. It is appreciated that most unemployed people are genuinely looking for work and that while unemployed they are in a state of poverty. The estimated impact of changes in benefits on job searching is quite small, suggesting that the extent of abuse of the system (that is, of claimants who already have or could easily find work) is quite limited. Therefore the approach of policy has tended to be towards greater conditionality, that is to say requiring claimants to show evidence of job search, or disqualifying from benefit those who turn down suitable job offers.

But at times of high unemployment, conditionality is no great help in that if there are very few jobs available there is little point in making the unemployed apply more vigorously. Creating a situation in which there are hundreds of applications for each job that becomes available is not only demoralizing for the unemployed, since nearly all the applicants will be rejected, but can also create difficulties for employers.

Many countries have instead tried to get unemployed people back into work through various forms of assistance under the general heading of active labour market policies. These include a wide range of measures from advice and assistance with job search to the provision of various types of training to the creation or subsidization of new jobs or placements. The general view is that such measures can on balance be helpful, but need to be carefully designed and very often do not provide a very good return on the money spent.[127] A more sceptical assessment, based on Swedish experience, is given by Calmfors et al.[128] In many countries, however, active labour market policies are seen as a necessary counterpart of benefit conditionality. This is because benefit withdrawal may be a credible threat only if there is some job or alternative activity for the unemployed person to take up, and active labour market policies provide such an alternative. This is often termed a "stick and carrot" strategy, where the incentive for unemployed people to avail themselves of the assistance provided by active labour market policies is secured by the threat of benefit withdrawal.

I consider next some issues surrounding the provision of active labour market policies.

(a) Job-matching services

In most countries there is a public employment service which provides information to unemployed people on job vacancies. Usually this takes the form of an employment exchange, which may either post up notices of jobs that are available or offer "over the counter" assistance with job search (or both). Sometimes the employment exchange is expected to assist employers by selecting suitable people to send in relation to particular vacancies. Generally the staff at the employment exchange are expected to provide advice to unemployed job seekers.

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[126] Ibid.

[127] J. Martin and D. Grubb, *What Works and for Whom: A Review of OECD Countries' Experiences with Active Labour Market Policies*, IFAU – Institute for Labour Market Policy Evaluation, Working Paper 2001:14, September 2001.

[128] L. Calmfors, A. Forslund and M. Hemstrom, *Does Active Labour Market Policy Work? Lessons from the Swedish Experiences*, IFAU – Institute for Labour Market Policy Evaluation, Working Paper 2002:4, 2002.

Greater assistance to job search can take a number of forms. One is to provide specialist "counsellors" at employment exchanges who can discuss with job seekers their interests and skills and offer advice as to the types of job which might be appropriate for a particular individual given the local labour market. A second type of assistance is with the mechanics of job application, for example help with telephone applications, filling in forms and advice on handling interviews. The next step is not only to provide these opportunities, but to require unemployed job seekers to make use of them. For example, the "Restart" programme launched in the United Kingdom in 1986 required unemployed people to attend interviews every six months at which they would discuss their approach to finding a job with a counsellor. Failure to attend such interviews could lead to benefits being withdrawn at least temporarily.

It is perhaps not very surprising that such assistance appears to improve the prospects of individual unemployed people finding work. Both advice and support can be helpful, and the possibility of sanction may activate the idle or demoralized. However, many doubt whether such measures can help the overall situation, particularly at times of high unemployment. When there are relatively few vacancies anyway, the only way unemployment can be significantly reduced is by increasing the total number of jobs rather than filling more quickly the existing stock of vacancies. It is fairly unusual for employers to claim that their expansion is inhibited by a shortage of labour (except of specific skills) so it appears unlikely that more effective job-search assistance will lead to the creation of more jobs.

Equally, if the problem of long-term unemployment is linked to the lower intensity and reduced effectiveness of job search on the part of the long-term unemployed, then evidently improved support for job search must to some extent lessen this problem.

(b) Training

The second main element of active labour market policy, and regrettably the most obviously unsuccessful, has been the provision of training. Clearly, more skilled and better qualified people tend to enjoy a better labour market experience in terms of more stable and better paid jobs, and lower unemployment rates, so it might appear that offering training courses to unemployed people leading to some sort of qualification would be of obvious value.

There have been many studies of the effectiveness of training programmes on the subsequent earnings and employment prospects of participants which have remarkably negative results.[129] Of course it is never clear whether those participating on training schemes have characteristics different in other ways from other unemployed people, which could explain their lack of success. Indeed, it has sometimes been alleged that employers regard participation on such programmes as a sign of lack of enterprise and initiative and discriminate against those who have been on training schemes. These studies include some "experiments", in which groups of unemployed people are randomly assigned – some to training schemes and some not – to obviate any such bias, but the results are no different.

The probable explanation for the poor results of training programmes is that employers are looking both for general competence, to which formal education may make an important contribution but may not be much assisted by short duration training courses, and for specific skills, which tend to be best learnt on the job. According to Grubb and Martin,[130] the most effective training courses are those linked to local employers. And those who derive the greatest benefit are found to be adult women returning to the labour market, whose employment skills may have become obsolete during their absence from the labour market and therefore perhaps have more to learn in terms of updating skills.

More fundamentally, one might ask why, if training is beneficial in a particular context, it will not occur without the need for government intervention. Obviously training is useful, but that does not mean that in all circumstances more training is productive. It could be that many of the unemployed simply will not get much benefit from training except in the context of a specific job, but once back into work they will acquire any new skills they need.

(c) Youth measures

According to conventional wisdom, youth measures are the least effective of any form of labour market policy. Numerous econometric studies have found that neither the employment prospects nor the wages in work of young people are improved as a result of participation in youth activities. Such activities may include training as well as the direct provision of jobs. A major issue identified in the OECD studies is that of the "attitude" of the young people towards the activities being provided. These are often regarded not so much as a form of help to them but rather as a form of "workfare" in which they are required to earn their benefit by performing some tasks perceived as inherently useless.

In the United Kingdom, the present Labour government has given great prominence to its "New Deal" for unemployed young people. The centrepiece of this is the combination of benefit withdrawal after six months with a guarantee to find for each young person still unemployed at that stage a job, a place on a training scheme or whatever. This scheme was introduced at a time when unemployment was in any case falling rapidly, and it has not proved easy to work out whether the New Deal itself has had any net effect. Equally, in these relatively benign labour market circumstances, it has been easier to place the young unemployed and the principle of benefit limitation has been achieved without much protest. Whether this will achieve a fundamental shift in young people's attitudes towards work remains to be seen.

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[129] For a recent survey see J. Heckman, R. Lalonde and J. Smith, "The economics and econometrics of active labor market programs", in O. Ashenfelter and D. Card (eds.), *Handbook of Labor Economics*, Vol. 3A (Amsterdam, North Holland, 1999).

[130] J. Martin and D. Grubb, op. cit.

(d) Subsidized placements

Subsidies to firms taking on unemployed workers appear relatively helpful to the unemployed workers concerned, but these policies are nonetheless the most difficult to evaluate. It is in particular always difficult to tell whether the job subsidized is a "new" job, or one which would have existed anyway, and if the latter, the extent to which the gain to the unemployed person taking it exceeds the loss to the person displaced. If it is a "new" job for the firm, does this correspond to an increase in the total number of jobs in the economy, or does some other job disappear somewhere else? To the extent that it is possible to answer these questions, the answers quoted in the OECD study are of the order of 90 per cent displacement. To the extent that the rest of the labour market is reasonably flexible, high displacement rates are not too much of a problem: the market will in time create jobs for all who want them, and if the unemployed are reactivated the number of jobs will in time increase in line.

An overall assessment of the value of active labour market policies is that they help primarily where the cause of unemployment has to do with the reluctance of unemployed people to take work. Such reluctance may be overcome by helping unemployed people find better jobs, through job search assistance, training or some forms of work experience, or for some people simply by the threat of benefit withdrawal. But they are of little help where there is a genuine shortage of jobs, and the effect of policies is only to intensify competition for the jobs available. What is then required are measures to increase the total number of jobs in the economy, and such measures must be focussed more on job creation and making employment more profitable, including for example reductions in non-wage labour costs, to which we now turn.

(iii) Measures to reduce non-wage labour costs

There has been long-standing concern that taxes, particularly those directly levied on employment, add to the costs of employing labour and thus diminish the stock of jobs. In the European context, reducing taxes, particularly on low-paid workers has been a central component of the policy the EU has urged on member states from the Delors White Paper of 1993[131] to the Broad Economic Policy Guidelines, which have accompanied the move to economic and monetary union.

The evidence on the effect of minimum wages and taxes on unemployment is not clear-cut. The impact of minimum wages was surveyed by Dolado et al.,[132] and their main finding was that over most of the labour market there was no significant or unambiguous impact on jobs, but where there was evidence of adverse effects it tended to be concentrated on youths. They conclude that there is a strong case for having a lower minimum wage for some workers. In some countries, and in particular in France, there was a significant effect on the employment of youths. This is linked in part with the fact that in France, unusually, the minimum wage for youths is the same as for adults, and also with the fact that in France labour taxes are relatively high even at the lower end of the distribution.

To some extent this concern is linked to the mechanism for setting wages, in that in many models taxes, whether levied on workers or their employers, are ultimately incident on labour, and therefore do not add to the costs of employment. For this reason many studies look at the overall tax wedge, and in many cases they find it has a significant effect.[133] But there is also concern that labour taxes have particularly adverse effects on employment, being a "tax on jobs". In principle this might be the case where the adjustment of wages is restricted, most obviously where there is minimum wage legislation or where benefits place a floor beneath low wages. There is also evidence that higher taxes create unemployment in labour markets where wages are inflexible due to wage bargaining institutions.[134]

(iv) Employment protection

Employment protection covers the various administrative procedures employers are required (usually by law) to go through prior to dismissing a worker, and include for example requirements for written warnings, periods of notice, contractual procedures in relation to unfair dismissals and severance pay. Such measures have an obvious and direct benefit to existing employees, in that their jobs are more secure, but equally are likely to make employers more cautious about hiring and hence may make it more difficult for unemployed workers to get hired. Employment protection more than any other policy can be said to offer clear benefits to insiders at the expense of outsiders, and such measures are very often criticized for their alleged adverse effects on the functioning of the labour market.

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[131] European Commission, "Growth, competitiveness, employment, the challenges and ways forward into the 21st century", *Delors White Paper*, 1993.

[132] J. Dolado, F. Kramarz, S. Machin, A. Manning, D. Margolis and C. Teulings, "The economic impact of minimum wages in Europe", *Economic Policy*, Vol. 23, 1996, pp. 317-372.

[133] O. Blanchard and J. Wolfers, op. cit.

[134] F. Daveri and G. Tabellini, "Unemployment, growth and taxation in industrial countries", *Economic Policy*, Vol. 30, 2000, pp. 47-104.

As far as direct effects on the unemployment rate are concerned, however, the evidence is not overwhelming. Jackman et al.[135] found that employment protection tended to be correlated with an increase in long-term unemployment, but had no net effect on total unemployment, while Nickell and Layard[136] found more of an effect on the employment to population ratio than on unemployment. The first finding is consistent with the idea that employment protection may reduce inflows into unemployment but increase the average duration of unemployment spells, while the second, perhaps more significantly, suggests that some of those who find it more difficult to get work may drop out of the labour force.

More indirectly, countries where employment is protected tend also to discourage business start-ups.[137] At one extreme, new businesses in Spain have to satisfy 17 separate procedures and the process takes on average almost six months, while at the other extreme, in Denmark, only two procedures are required and the process takes on average only one week. Fonseca et al. further show that impediments to business start-ups are strongly and negatively correlated with the employment to population ratio. This is further evidence that employment is constrained by a shortage of jobs in circumstances of economic change.

2.5 Conclusions

The general theme of this paper is that over the past 30 years labour markets have been subject to massive change resulting in part from the effects of very rapid technological developments, in particular sectors on labour demand, and in part from the effects of major demographic and social change on labour supply. It is also clear that the adjustment and adaptation of the labour market to such shocks is itself difficult, but by and large can only be achieved by institutional arrangements supporting new job creation rather than by focusing on the protection of existing jobs. I have argued that the evidence of differential participation rates suggests that some countries have failed to encourage new job creation, while protecting existing jobs, with the outcome that a smaller proportion of their population is in work, and consequently per capita income is lower. Such countries are in a worse position to face either new technological developments or the demographic implications of longer life expectancy.

A recurring theme in political economy is why reforms which promise increased economic efficiency are so often resisted by governments. Generally such resistance is explained on the grounds that most reforms create losers as well as gainers, and although, if the reforms increase efficiency it would be possible to fully compensate the losers and still leave the rest of the community better off, such compensation may be impractical. Even so, where reforms promise substantial efficiency gains one might expect the gainers to outnumber the losers, and hence be attractive to elected politicians.

Resistance to reform is then generally explained in terms of an asymmetry between the effects of policy on clearly identified groups on the one hand and the community as a whole on the other. Specific groups can organize to exert political pressure (e.g. producers in a particular sector), while disparate and unorganized groups, such as the unemployed, or ill-defined groups such as taxpayers who might benefit from reforms reducing the budgetary costs of unemployment, cannot bring similar political pressure to bear. There have been attempts to explain the attachment to labour market rigidities in some political systems along these lines.[138] Nonetheless it remains unclear why countries such as those of western Europe, facing much the same economic conditions, have reacted in different ways in terms of economic policy.

What does seem clear, however, is that low employment in many western European countries does not reflect the wishes of the people involved, but rather a lack of adequate labour market opportunities. This lack of opportunity is at root a failure of policy, and reflects a political environment within which the interests of established groups have priority over the well-being of the community as a whole. Resources are devoted to the protection of existing jobs rather than to the encouragement of new job creation. In the United States, just over 74 per cent of people of working age have jobs. Several European countries (the Netherlands, Nordic countries and Switzerland) do as well, but the European average is substantially lower. What distinguishes the European countries with high employment rates from the others is primarily that their labour market institutions differ, and these differences result from differences in policy. Policy initiatives to raise the employment rate would not only increase economic opportunities for people now excluded from the labour market, but also improve the government budget and increase economic welfare.

It is the contention of this paper that the main cause of continuing high unemployment in some European countries lays on the demand rather than the supply side of the labour market. This means that for example active labour market policies, although they may assist some individuals, are unlikely to be the most effective mechanism for addressing the problem. What is likely to be more helpful is a reduction in non-wage labour costs, particularly in the form of barriers to new business start-ups, and in the form of legislation and regulations, which impose administrative costs on employers.

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[135] R. Jackman, R. Layard and S. Nickell, op. cit.

[136] S. Nickell and R. Layard, op. cit.

[137] R. Fonseca, P. Lopez-Gardia and C. Pissarides, “Entrepreneurship, start-up costs and employment”, *European Economic Review*, Vol. 45, 2001, pp. 692-705.

[138] G. Saint-Paul, “Exploring the political economy of labour market institutions”, *Economic Policy*, Vol. 23, 1996, pp. 263-315.

DISCUSSANTS' COMMENTS

2.A Jørgen Elmeskov[139]

It is difficult to be a discussant of a paper with which one basically agrees. And I really do agree with most of what is said in this paper. My comments will therefore mainly be ones of emphasis rather than disagreement. Also, I will not aim to be comprehensive in terms of covering the whole paper but will focus mostly on the policy implications of the paper.

Despite its title, the paper puts the emphasis on employment performance rather than on unemployment. This is an appropriate focus for three reasons, which are mentioned in the paper:

- Unemployment differences across countries are really just the tip of the iceberg. The cross-country variation in employment rates is much larger than the variation in unemployment;
- The differences in labour force participation across countries appear to a large extent to be driven by unemployment. That is, they do not represent some kind of voluntary, undistorted behaviour. Therefore, employment gives a better impression than unemployment of the problems caused by labour market malfunctions. Unemployment has both a direct negative effect on participation – the discouraged worker effect – and an indirect one through misguided policies aimed at reducing participation in the forlorn hope of reducing unemployment from the supply side. Early retirement policies are a prime example of this;
- Finally, the paper argues that a focus on employment and participation is particularly important in light of the future ageing of the population. Boosting employment will help to provide the material means to deal with population ageing.

While I agree strongly with the focus on employment in the paper, I was perhaps a bit puzzled as to why employment is seen only through the lens of the number of people in work, ignoring the issue of how much they work. I agree that policies, which keep people out of work who would like to work if given proper incentives, are misguided. But I also think policies are problematic, giving people an incentive to work only part-time. Ignoring this aspect of employment means ignoring policies, which are important for overall economic outcomes.

Let me then move on to consider policies. I will focus first on the policies that are discussed in the paper and add a few questions and observations to the arguments that the paper provides and with which I mostly agree.

- First, wage-setting. The paper considers two ways of influencing wage setting to be viable. One may be characterized as the Thatcher way of curbing union power and the other as the Dutch way of seeking a cooperative solution. The paper, probably wisely, does not really come down on either side but it could perhaps have been more explicit as to what are the necessary preconditions for going down either route.
- It is, for example, not obvious that it would have been possible for the Thatcher government to follow the Dutch way, given that at the time British unions were more fragmented and some of them more extreme in their views. The paper could perhaps also have spelled out the different implications of the two policy approaches. For example, the policy choice will have important implications for the ease of relative wage adjustment. This may be a consideration in the choice of policies in this area – insofar as policy can influence wage bargaining institutions at all.[140]
- Second, unemployment benefits. The paper is right that the empirical evidence is overwhelming that generous benefits lead to higher unemployment.[141] The paper is also right that there has been little reform to the central parameters of benefit schemes such as statutory replacement rates and maximum duration. In contrast, eligibility conditions have been tightened in many countries – with the result that outsiders in the labour market, such as the young, now find it more difficult to receive unemployment benefits.[142] Perhaps there is a less charitable interpretation of this pattern of reform than that given in the paper. It looks as if reforms that could potentially hurt the labour market

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[139] These comments represent the view of the author and are not necessarily shared by the OECD or its member governments.

[140] A detailed comment is that the paper ignores a number of important wage-bargaining institutions, including the practice of administrative extension of wage agreements. It is a striking fact that less than 10 per cent of French workers are unionized but about 90 per cent are covered by collective agreements.

[141] J. Elmeskov, J. Martin and S. Scarpetta, "Key lessons for labour market reforms: evidence from OECD countries' experiences", *Swedish Economic Policy Review,* Vol. 5, No. 2, 1998.

[142] For an overview of reforms through the 1990s, see OECD, *Implementing the OECD Jobs Strategy: Assessing Performance and Policy* (Paris), September 1999.

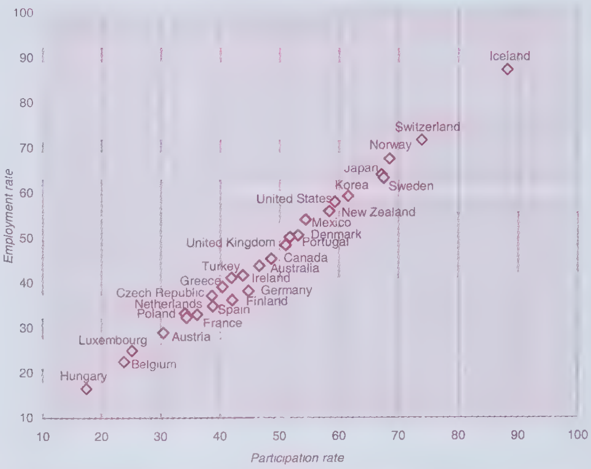
insiders, who comprise the median voter, are not being undertaken, while it is politically less costly to put pressure on the outsiders.

- Third, active labour market policies. Here the paper takes a rather dusty view - perhaps exaggerating a bit. It is probably the case that money is being wasted in this area. But it should also be recognized that, properly designed, such policies do seem to have a beneficial, if modest, effect.[143]
- Fourth, non-wage labour costs. Reducing these across-the-board may well be good for employment but is also likely to be very expensive for government budgets. Hence, countries tend to cut payroll taxes mostly at the low end of the pay scale where minimum wages and social transfers provide effective floors to wages. Many countries are now also moving down the road of providing in-work benefits at the low end of the wage scale, which the paper could perhaps have mentioned. That it did not, is consistent with the view expressed in the paper that lack of employment is not a supply problem. But perhaps this case is somewhat overstated. There is evidence that in-work benefits do boost employment in some countries.[144] But there is also evidence that, as they are expanded, they may face declining returns.[145]
- Fifth, employment protection legislation. The paper is rightly critical of excessively tight rules in this area because of their impacts on both employment and on product markets.[146] In this context it may be worth mentioning that while many countries have reduced employment protection for workers at the margin of the labour market, for example by easing the regulation of fixed-term contracts, there has been much less action on the provisions affecting permanent employees. This follows the pattern of being tough on the outsiders but not on the insiders. It is not obvious that this is the most effective strategy to improve employment.

CHART 2.A.1

Employment and participation rates for older male workers, 1998

(Per cent)



Source: OECD.

Let me mention three policy areas that are downplayed or even not mentioned in the paper but which I think are important elements in a strategy to boost employment:

- First, taxes. Perhaps because the paper does not consider the hours aspect of employment – or, for that matter, the human capital aspect – it does not say anything about the role of tax systems. But taxes may also influence the number of persons employed. In any case, consideration of taxes could be a useful complement to the current analysis.
- Second, product market competition. There is widespread agreement that the extent of product market competition affects wage formation and through that channel, but also through others, influences employment.[147] Recent research at the OECD suggests that different degrees of anti-competitive product market regulation may account for some 5-6 percentage points difference in employment rates among those countries with the most and the least restrictive regulation.[148]
- Third, retirement incentives. The employment of older workers is perhaps the point where I disagree most with the idea in the paper that it is the demand and not the supply side of labour markets that drives employment outcomes. Chart 2.A.1 illustrates my point. The vertical axis shows the employment rate for males between 55 and 65 years of age. It varies tremendously across countries, from below 20 per cent

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[143] J. Martin, "What works among active labour market policies: evidence from OECD countries' experiences", *OECD Economic Studies*, No. 30, Volume 2000, No. 1 (Paris).

[144] *OECD Economic Studies – Special Issue on Policies to Make Work Pay*, No. 31 (Paris), 2000.

[145] A. Bassanini, J. Rasmussen and S. Scarpetta, *The Economic Effects of Employment-conditional Income Support Schemes for the Low Paid: An Illustration from a CGE Model Applied to Four OECD Countries*, OECD Economics Department Working Papers, No. 224 (Paris), October 1999.

[146] There has been found, respectively, a positive effect on unemployment and a negative effect on employment of employment protection. See J. Elmeskov et al., op. cit. and G. Nicoletti, A. Bassanini, E. Ernst, S. Jean, P. Santiago and P. Swaim, *Product and Labour Market Interactions in OECD Countries*, OECD Economics Department Working Paper, No. 312 (Paris), December 2001. A negative effect on multi-factor productivity as well as on the entry rates of relatively small firms has also been found. See S. Scarpetta, P. Hemmings, T. Tressel and J. Woo, *The Role of Policy and Institutions for Productivity and Firm Dynamics: Evidence from Micro and Industry Data*, OECD Economics Department Working Paper, No. 329 (Paris), April 2002.

[147] For the effect of product market competition on wages, see S. Jean and G. Nicoletti, *Product Market Regulation and Wage Premia in Europe and North America: An Empirical Investigation*, OECD Economics Department Working Paper, No. 318 (Paris), January 2002.

[148] Nicoletti et al., op. cit.

to around 90 per cent. On the horizontal axis is the participation rate and it varies equally much. Overall, there is a one-to-one relationship between participation and employment rates: where older workers are on the labour market they tend to be employed. That relationship is easy to understand with causality running principally from the supply to the demand side. But it seems very difficult to argue that demand side differences across countries can explain employment rates varying between 20 and 90 per cent which then, through some magic combination of discouraged worker effects and demand-induced retirement policies, are exactly matched by similar variations in participation rates. Here I think the paper misses a policy message that will become increasingly important as populations age: existing early retirement policies in some countries are simply unsustainable and the sooner they are changed, the better.

Let me finish by saying that in order to discharge my duty as discussant I have emphasized some areas where I think more could be said or things could be said differently. This should not detract from what I said initially. Let me repeat that overall I like this paper and agree with almost everything it has to say.

2.B Juan F. Jimeno

This paper surveys facts, explanations and policies regarding unemployment in western Europe. It provides an overview of the vast effort devoted by labour economists over the last two decades to the analysis of the unemployment problem. By its own nature, the paper covers lots of ground and a brief discussion cannot do full justice to it. In general, I tend to agree with the main propositions laid out in the paper. Given the limitation and the agreement, I will default on the "discussant duty" of being critical, and limit my comments to complementing some of Professor Jackman's statements regarding:

- The measurement of unemployment;
- Institutions, the socio-economic environment and the labour market;
- Policies and institutional reforms in west European countries.

My comments on the last two points above are basically addressed to two questions: (i) are labour market institutions the culprits of the European unemployment problem, and (ii) if so, why are they not reformed more aggressively?

The measurement of unemployment

On this topic Professor Jackman argues that the distinction between unemployment and non-participation is far from clear-cut in practice. To be unemployed is, by definition and in principle, not voluntarily chosen by the individual. In contrast, non-participation is regarded as a voluntary choice. But there are "discouraged workers" who are classified as "out of the labour force", since they do not search for jobs although they are willing to work, and also the "waiting unemployed", that is, individuals who refuse job offers in the hope of getting better job opportunities. In fact, as shown by Jones and Riddell[149] in an analysis of Canadian data on flows from unemployment and non-participation in employment, there is substantial heterogeneity within the non-employed, and attempts at classifying the non-employed into unemployed and non-participants is unlikely to fully capture the complexity of labour force activity.

TABLE 2.B.1

Decomposition of the response of labour market variables to a 1 percentage point increase in employment growth
(Percentages of the change in the employment level)

	Year 1	*Year 2*	*Year 3*
European Union (51 regions, 1975-1987) [a]			
Unemployment	21	30	25
Participation	74	43	31
Migration	4	27	45
United States (51 states, 1958-1990)			
Unemployment	18	17	16
Participation	29	20	13
Migration	52	62	70
Spain (17 regions, 1976-1994)			
Unemployment	36	39	33
Participation	23	18	18
Migration	41	43	49

Source: J. Decressin and A. Fatás, "Regional labour market dynamics in Europe", *European Economic Review*, Vol. 39, No. 9, December 1995, pp. 1627-1655; J. Jimeno and S. Bentolila, "Regional unemployment persistence (Spain, 1976-1994)", *Labour Economics*, Vol. 5, No. 1, 1998, pp. 25-51.

[a] The European Union includes Belgium, Denmark, France, (west) Germany, Greece, Ireland, Italy, the Netherlands, Portugal, Spain and the United Kingdom.

Thus, the evidence presented by Professor Jackman, which shows that there is a negative correlation between unemployment and participation rates across countries, could be interpreted as non-participation acting as a buffer to adverse labour demand shocks. There is plenty of evidence favouring this interpretation. Studies of regional labour market dynamics[150] find that, while in the United States labour mobility is the main adjustment mechanism when a region-specific labour demand shock occurs, in western Europe the variable that takes most of the adjustment burden, at least in the short run, is exit from the labour market (table 2.B.1).

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[149] S. Jones and W. Riddell, "The measurement of unemployment: an empirical approach", *Econometrica*, Vol. 67, No. 1, January 1999, pp. 147-162.

[150] O. Blanchard and L. Katz, "Regional evolutions", *Brookings Papers on Economic Activity*, 1 (Washington, D.C.), 1992, pp. 1-75; J. Decressin and A. Fatás, "Regional labour market dynamics in Europe", *European Economic Review*, Vol. 39, No. 9, December 1995, pp. 1627-1655; J. Jimeno and S. Bentolila, "Regional unemployment persistence (Spain, 1976-1994)", *Labour Economics*, Vol. 5, No. 1, 1998, pp. 25-51.

TABLE 2.B.2

Employment and unemployment rates in the European Union and the United States, 1990 and 1999
(Per cent)

	European Union						United States					
	1990			1999			1990			1999		
	All	Men	Women	All	Men	Women	All	Men	Women	All	Men	Women
Unemployment rates												
All	8.4	6.7	10.8	9.3	8.2	10.9	5.7	5.7	5.6	4.3	4.1	4.4
15-24	15.8	13.6	18.3	17.2	16.1	17.0	11.2	11.6	10.7	9.9	10.3	9.5
25-54	6.8	5.3	9.2	8.1	6.9	9.2	4.6	4.6	4.6	3.2	3.0	3.4
55-64	6.5	6.2	6.9	7.8	8.4	7.7	3.3	3.8	2.8	2.7	2.7	2.6
Employment rates												
All	61.6	74.7	48.7	62.6	72.0	53.1	72.2	80.7	64.0	73.9	80.5	67.6
15-24	46.2	50.7	40.6	39.5	43.4	35.5	59.8	63.5	56.1	59.0	61.0	57.0
25-54	73.4	88.8	55.6	75.5	86.3	64.7	79.7	89.1	70.6	81.4	89.0	74.1
55-64	38.3	53.1	25.4	38.6	48.3	27.8	54.0	65.2	44.0	57.7	66.1	50.1

Source: OECD, *Employment Outlook* (Paris), 2000.

This grey area between unemployment and non-participation justifies, for instance, the use of employment rates, rather than unemployment rates, to establish "full employment goals", as in the European Union Strategy for Employment. And by looking at employment rates we find further support for the view that labour market institutions are very relevant to the functioning of the labour market, particularly when employment rates are disaggregated by gender and age (table 2.B.2). It is as difficult to explain cross-country differences in the employment rates of older workers without appealing to retirement policies,[151] as it is to explain youth and female employment rates differentials with respect to adult male workers without appealing to employment protection legislation, wage-setting procedures, the effectiveness of educational systems and active labour market policies.[152]

Institutions, the socio-economic environment and the labour market

If labour market institutions are so relevant for explaining cross-country differences in unemployment, how could it be that in the 1960s, with more or less the same institutions, most western European countries had lower unemployment rates than the United States? In my opinion the answer is provided by a combination of the hysteresis and the interactive models that Professor Jackman describes in section 2.3(i). As he puts it: "a set of institutions and policies which function effectively in one economic environment may be dysfunctional in another and in fact lead to higher equilibrium unemployment". In other words, both the short-run response of unemployment to shocks and the duration of the adjustment process to the medium-run equilibrium unemployment rate depend on the characteristics of labour market institutions ruling wage determination, hiring and firings, and the incentives to exit from non-employment into employment.

It seems evident that current labour market institutions are out-of-line with the type of shocks that they are supposed to accommodate. The so-called "European Welfare State", in which the "typical" labour market institutions with a "European flavour" constitute the main pillar, was designed for a socio-economic environment, which is completely different to the one prevailing nowadays. In that "golden age" economic growth was high and more or less stable, there was low international competition, employment was being reshuffled from agriculture to manufacturing, labour supply came primarily from adult, male, heads of households, and life expectancy was only slightly above legal retirement ages. Nowadays, economic growth is lower, more volatile and skill biased, international competition is fierce, employment is moving from manufacturing to labour-intensive service firms which very often pay lower wages, females and youths have different patterns of participation in the labour market, the supply of labour is becoming more and more heterogeneous and, finally, life expectancy has increased and continues to increase very fast.

In short, employers now require much more flexibility to cope with changing demand and technology. And there is much more heterogeneity among workers. In this scenario the imposition of homogenous and restrictive employment conditions favours some groups but imposes a heavy burden on others. Hence, it should not come as a surprise that the "European Welfare State" and, in particular, some European labour market institutions are under continuous stress since they were not designed to cope with the new socio-economic developments.

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[151] J. Gruber and D. Wise, *Social Security and Retirement Around the World* (NBER and The University of Chicago Press, 1999).

[152] G. Bertola, F. Blau and L. Kahn, "Evolving institutions and demographic employment patterns", 2002, mimeo; J. Jimeno and D. Rodriguez-Palenzuela, "Youth unemployment in the OECD: demographic shifts, labour market institutions and macroeconomic shocks", 2002, mimeo; J. Messina, "Output shares, employment and product market regulations", 2002, unpublished Ph.D. dissertation.

Policies and institutional reforms

The recent experience of labour market reforms in EU countries shows that very often institutional changes are marginal and, too often, contradictory. When employment policies rose to the head of the EU political agenda after the Amsterdam Treaty, a coordinated European Employment Strategy was launched to fight unemployment. The European Council agreed at the Luxembourg Jobs Summit in November 1997 that this strategy should be built on thematic priorities, grouped around four pillars and set out in employment guidelines. The four pillars (improving employability, developing entrepreneurship, encouraging adaptability of businesses and their employees, and strengthening the policies for equal opportunities) are theoretically sound, but in practice they have not led so far to the needed fundamental changes in employment policies. If anything, they have been a good excuse for developing active labour market policies whose effectiveness in reducing unemployment is open to question, as emphasized by Professor Jackman.

CHAPTER 3

UNEMPLOYMENT IN THE TRANSITION ECONOMIES

Alena Nesporova[153]

3.1 Introduction

This paper investigates the causes of the disappointingly poor employment performance and persistently high unemployment in the transition countries of central and eastern Europe and central Asia (CEECA). It begins with an overview of labour market developments in these countries, identifying some of the marked differences between the central and south-east European (CSEE) transition countries (including the Baltic states) and those in the Commonwealth of Independent States (CIS). The reasons for these differences lie in the diversity of existing conditions at the outset of transition and the variety of their economic reforms, institutional arrangements and policies. The paper explores the effects of macroeconomic policy, modes of privatization, the ability to attract foreign direct investment, the development of small enterprise and the slow progress of institutional reforms. Demographic factors, as well as variations in education, labour market and social policies, are evaluated from the perspective of their impact on labour supply and its match with demand. The role of labour market regulation, incomes policy and collective bargaining is also examined. In conclusion, some necessary improvements in policy are suggested to boost employment and reduce high levels of unemployment in transition economies.

3.2 Key labour market developments in transition economies in the 1990s

(i) Decline in employment

The labour markets of the former centrally planned economies of CEECA, at the onset of transition, were characterized by full employment, no open unemployment (with the exception of the former SFR of Yugoslavia) and an excess of labour demand over supply. However, full employment was achieved at the cost of low wages, with a demotivating effect on workers. Widespread overstaffing (labour hoarding) occurred in many sectors and serious distortions in the allocation of labour in industry contributed to low levels of labour productivity. The economic reforms launched in the wake of political changes were directed at reversing these negative characteristics, while social reforms were aimed at making these changes socially acceptable and fiscally affordable.

Almost overnight, national economies were opened to world markets through the introduction of economic measures that also allowed rapid price liberalization, combined with strict macroeconomic stabilization policies. The immediate result was a sharp decline in the economic performance of these countries, much steeper than originally expected. The demand for labour collapsed immediately and, after a short lull, employment also started to decline. Even at this early stage, a significant difference in employment trends had emerged between the transition countries of the CSEE and those of the CIS, with the three Baltic countries moving gradually from the second to the first group.

In the CSEE region the fall in employment was already dramatic in the nascent years of the economic transition, following more or less closely on the heels of a sharp slump in production (table 3.2.1). To facilitate cross-country comparisons, the transition decade has been divided into two phases: the 1990-1994 period of profound, initial changes driven by major economic and social reforms, in combination with macroeconomic austerity measures and intense external shocks; and the 1995-2000 period of relative economic stabilization. A comparison of production and employment trends reveals that some countries, such as the Czech Republic, Romania, Slovakia and Slovenia, were able to keep employment losses well below those of production, at the cost of losses in labour productivity. Others, such as Bulgaria, Hungary and Poland, achieved labour productivity increases by sharper cuts in employment.

However, again in contrast to initial assumptions, employment did not improve much in the countries that achieved relatively high rates of economic growth. On the contrary, in the Czech Republic, Hungary and Poland, for example, employment continued to decline for several years and then stabilized with only a negligible recovery. In those countries directly or indirectly affected by the Balkan conflict, or unable to sustain economic growth due to serious macroeconomic imbalances, employment continued or resumed its decline. Towards the end of the 1990s, macroeconomic and structural factors had contributed to further reductions in employment virtually

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[153] The author benefited from comments provided by Peter Auer, Sandrine Cazes, Raul Eamets, Krzysztof Hagemejer and Mieczyslaw Socha.

TABLE 3.2.1

GDP and employment in transition economies: average annual growth rates, 1990-2000
(Per cent per annum)

	GDP		*Employment*	
	1990-1994	*1994-2000*	*1990-1994*	*1994-2000*
Albania	-5.6	6.2	-5.0	-1.4
Armenia	-16.2	5.4	-2.2	-2.5
Azerbaijan	-17.0	3.7	-0.5	0.3
Belarus	-7.8	3.3	-2.3	-0.9
Bulgaria	-3.9	-0.6	-5.7	-1.6
Croatia	-9.3	4.2	-6.3	0.5
Czech Republic	-2.6	1.8	-2.3	-1.0
Estonia	-8.8	5.0	-4.3	-2.1
Georgia	-27.5	5.2	-10.8	6.9[a]
Hungary	-3.3	3.6	-7.2	0.4
Kazakhstan	-9.6	0.6	-4.2	-1.0
Kyrgyzstan	-14.4	3.6	-1.5	1.2
Latvia	-15.9	3.7	-6.3	-0.7
Lithuania	-13.4	3.3	-2.5	-0.9
Poland	1.0	5.5	-2.9	0.9
Republic of Moldova	-20.5	-2.3	-5.1	-1.7
Romania	-4.3	-0.2	-2.0	-3.4[b]
Russian Federation	-10.3	0.2	-2.3	-1.0
Slovakia	-5.2	4.5	-3.8	–
Slovenia	-1.7	4.3	-4.7	0.4
Tajikistan	-20.1	-2.1	-1.1	-1.0
The former Yugoslav Republic of Macedonia	-5.5	2.2	-6.0	-3.9
Turkmenistan	-9.2	3.9	3.5	2.4
Ukraine	-14.1	-3.8	-2.4	-1.3
Uzbekistan	-4.9	3.1	1.3	1.2
Yugoslavia	-18.0	1.4	-2.8	-1.3
Memorandum items:				
CSEE	-3.1	3.2	-4.0	-0.4[b]
Baltic states	-13.3	3.8	-4.1	-1.1
CIS	-11.1	0.1	-2.3	-1.1[a]

Source: UNECE Common Database; author's calculations.

[a] 1994-1998.

[b] 1994-1999.

everywhere. The various reasons for these developments are discussed below, in section 3.3.

In contrast to job losses in the formal sector, there was a rapid growth of employment in the informal sector of all the transition economies. The size of the informal sector tends to correlate negatively with the economic level of a country. One reason for the expansion of the informal sector is tax evasion, which has been facilitated by legislative changes lagging behind economic developments and by weak law enforcement. A second factor is the large fall in the incomes of a major proportion of the population as a result of the transition crisis and rising unemployment. Economic recovery and progress in legislative reform in central Europe have been accompanied by some reduction in informal sector activity.[154] When formal and informal labour inputs are taken together, the employment decline has actually been much smaller than official labour statistics indicate.

In the CIS countries and initially also in the Baltic states there was a smaller decline (and in some countries even an increase) in employment despite considerable production losses. Later, employment continued to fall while the decline in production slowed down and eventually turned up, so that finally there was also some improvement in labour productivity in the CIS countries. However, only very recently has there been a slight rise in employment in some of these countries. Moreover, apart from a much larger share of informal labour, compared with the CEECA countries, those in the CIS also show high levels of underemployment (or hidden unemployment, according to some experts), which are manifested in forced administrative leave, temporary reductions in working hours and delays in the payment of wages.

(ii) Shrinking participation rates

Employment losses were transformed partly into open unemployment and partly into (formal) economic inactivity. Indeed, according to table 3.2.2, participation rates of the population aged 15-64 declined considerably in all transition economies between 1990 and 1999 (with the striking exception of almost negligible changes in Georgia and Slovenia). A comparison of employment outflow in five central European countries (using labour market flow data from labour force surveys) reveals that outflows to inactivity have generally exceeded outflows to unemployment (table 3.2.3). This imbalance was marked in the initial period of economic transition, indicating that strong labour market tensions were resolved primarily by pushing certain disadvantaged, less competitive groups of workers out of the labour market altogether, and only secondarily by open unemployment.

This decline is often explained in the literature by more frequent withdrawals of women from the labour market as a result of their deteriorating access to affordable and reliable childcare facilities and the offer of long parental leave (notwithstanding a generally low parental allowance). To this argument is added the allegedly higher labour costs of women, and their family status as second income earners, both of which might

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[154] In Poland, a 1998 labour force survey on the "hidden" economy revealed that 4.8 per cent of the population aged 15 and over were engaged in the informal sector (3.8 per cent in rural areas and 6.4 per cent in urban areas). Unregistered activity was more frequent in the case of men (7 per cent of the male population aged 15 and over) than women (2.7 per cent). Regarding their official labour market status, 5.5 per cent of workers engaged in informal activities were employed, 14.6 per cent were unemployed and 2.4 per cent economically inactive. For 14 per cent of respondents, this activity had been pursued for five months or more, while for 30 per cent it represented only up to five days. Compared with the results of a similar survey conducted in 1995, there has been a significant decrease in unregistered labour. The share of persons aged 15 and over engaged in the informal sector in 1998 dropped by 2.8 percentage points, from 7.6 per cent in 1995. This decline is mainly attributable to a general improvement in the labour market, with more job opportunities emerging in the formal economy. S. Kostrubiec, *Unregistered Employment in Poland in 1998*, Central Statistical Office (Warsaw), 1999.

TABLE 3.2.2

Participation rates of the population aged 15-64 in transition economies, 1990 and 1999
(Per cent)

	1990			*1999*		
	Men	*Women*	*Total*	*Men*	*Women*	*Total*
Albania	86.4	63.3	75.2	..	..	..
Armenia	79.5	69.1	74.1	78.5[a]	55.6[a]	66.4[a]
Azerbaijan	77.8	36.4	66.7	50.1[bc]	44.2[bc]	47.1[bc]
Belarus	82.0	72.6	77.2	45.8[bc]	46.0[bc]	45.9[bc]
Bulgaria	77.7	72.2	75.0	75.9	64.9	70.2
Croatia	76.9	56.4	66.6	59.8[b]	51.4[b]	55.6[b]
Czech Republic	82.2	74.1	78.1	80.3	64.4	72.4
Estonia	83.3	75.9	79.4	78.1	66.4	72.1
Georgia	80.1	63.5	71.5	78.9	62.5	70.2
Hungary	74.5	57.3	65.4	67.8	52.3	59.9
Kazakhstan	82.0[d]	69.5[d]	75.6[d]	..	..	..
Kyrgyzstan	78.2[d]	65.0[d]	71.5[d]	..	..	..
Latvia	83.6	75.3	79.4	75.3	62.6	68.7
Lithuania	81.8	70.5	76.0	77.4	68.3	72.7
Poland	80.1	65.1	72.5	72.8	59.7	66.1
Republic of Moldova	81.5	70.4	75.7	..	..	..
Romania	76.7	60.5	68.5	76.3[b]	61.9[b]	69.0[b]
Russian Federation	91.6	71.7	76.5	74.2	63.9	68.9
Slovakia	82.5	74.2	78.3	76.1	62.6	69.3
Slovenia	76.7	64.8	70.7	72.2	63.3	68.0
Tajikistan	77.7	56.2	66.8	32.5[ec]	28.2[ec]	30.3[ec]
The former Yugoslav Republic of Macedonia	77.9	53.1	65.6	72.8	46.5	59.7
Turkmenistan	81.0	64.3	72.5	..	..	..
Ukraine	79.7	69.8	74.5	71.4	61.8	66.4
Uzbekistan	77.9	64.2	71.0	..	..	..
Yugoslavia	77.0	54.9	66.0	..	..	..

Source: ILO, Bureau of Statistics, *Economically Active Population* (Geneva) (data for 1990); labour force survey; official estimates; establishment census; population census; author's calculations.

[a] 1997.

[b] 1998.

[c] 15+.

[d] 1989.

[e] 1996.

influence their decision to resign from formal gainful activity. However, table 3.2.2 confirms this view for only seven countries (Armenia, Bulgaria, the Czech Republic, Estonia, Latvia, Slovakia and The former Yugoslav Republic of Macedonia); in all the others, participation rates declined more for men than for women or were similar for both.

Table 3.2.4 compares the participation rates for three age groups: young (15-24), prime-age (25-49) and older (50-64) workers in selected transition economies. The steepest fall in labour supply is in the 15-24 age group. First of all, this could be explained by increasing returns to education in the course of transition, motivating many young people to achieve higher levels of education and thus to postpone their labour market entry. A second factor is the increasingly difficult transit from education to work. Employers are unwilling to bear the additional costs of on-the-job training of inexperienced young workers; and here there may also be a significant "insider" effect. In addition, many young people are confronted with a lack of demand for their newly acquired professional qualifications, a consequence of unsatisfactory reforms to national education systems, which have lagged considerably behind the needs of the labour market and have led to skill mismatches and employers' complaints at the lower quality of education.

For older workers, the comparison is somewhat ambiguous. At the start of transition, working pensioners were the first group to be laid off everywhere; many countries introduced early retirement schemes to avoid the long-term unemployment of older workers. This approach has recently changed. First, early retirement schemes have been reduced or even discontinued because they put too heavy a burden on national pension systems that were already in deficit. Second, in order to make pension systems more financially sustainable, the statutory retirement age has been raised in many transition countries. Third, low pension levels have forced older workers to keep working and to accept less attractive jobs, while improved labour markets have also opened job opportunities for less competitive groups of workers. For all these reasons, participation rates for the 50-64 age group tended to recover in the second half of the 1990s – to such an extent that in Armenia, the Czech Republic, Hungary, Georgia and Romania there has been an overall increase over the past decade. Still, in Poland, The former Yugoslav Republic of Macedonia and Ukraine the 50-64 group showed the largest decline in economic activity. In five other countries (Latvia, Lithuania, the Russian Federation, Slovakia and Slovenia), the 50-64 year olds had the second largest fall of the three age groups (table 3.2.4).

The reasons for these considerable falls in economic activity (even in the prime-age group most typically represented in employment) are numerous. They include: voluntary withdrawals (e.g. persons who have had their previously nationalized property returned, or the wives of leading executives and entrepreneurs); semi-voluntary quits (e.g. women on extended maternity or parental leave);[155] and forced withdrawals (discouraged workers, including those who opt for social welfare combined with informal work instead of accepting low-paid or arduous jobs).

(iii) Unemployment trends

As noted earlier, open unemployment has been the second main destination of workers made redundant or who voluntarily quit their jobs and were unable to find new ones. Once again, there are major differences in both the level and development of unemployment between the two groups of transition economies.

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[155] As parental allowances are small, a large number of these women would prefer to work if they had access to cheap and reliable childcare and could get a well-paid job.

TABLE 3.2.3

Separation rates according to destination of outflows from employment in selected transition economies, 1990-2000

(Per cent)

	1990	*1991*	*1992*	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*	*1999*	*2000*
Employment to unemployment											
Czech Republic	..	..	..	1.7	1.4	1.2	1.5	1.8	3.0	..	..
Estonia	0.7	1.7	4.9	5.4	5.1	4.2	4.8	4.6	6.0	..	..
Hungary	..	..	..	4.7	2.8	2.8	2.2	2.2	1.7	1.4	1.2
Poland	..	..	7.9	8.4	8.1	6.8	6.2	5.0	5.0	..	..
Slovenia	2.3	4.1	..	3.3	2.3	2.2	2.7	2.4	2.5	2.8	1.8
Employment to inactivity											
Czech Republic	..	..	..	5.3	4.3	5.6	4	3.8	3.7	..	..
Estonia	5.6	6.4	10	7.5	6.5	3	5	4	4.6	..	..
Hungary	..	..	..	8.0	5.7	6.3	5.1	5.4	4.1	3.2	3.1
Poland	..	..	11.4	12.8	11.1	8.4	8.3	7.7	6.8	..	..
Slovenia	8.7	8.0	..	6.5	6.2	5.1	6.9	7.1	5.9	7.1	6.3

Source: S. Cazes and A. Nesporova, *Towards Excessive Job Insecurity in Transition Economies?*, ILO Employment Paper, No. 2001:23 (Geneva), 2001.

In the CSEE economies, unemployment rates accelerated in the first two to three years after the introduction of economic reforms and reached double-digit levels with the exception of the Czech Republic (table 3.2.5). Economic recovery contributed first to a stabilization of the unemployment rate and only later to some reduction, supported in part by restrictions in national unemployment benefit schemes (discussed further in section 3.3(xi) below). Slumps in economic performance followed by stabilization programmes, launched with the aim of restoring macroeconomic equilibrium and accelerating structural reforms in the enterprise sector in some countries (Bulgaria, the Czech Republic, Romania), have led to a renewed rise in unemployment since 1997-1998, this time also severely hitting the Czech Republic. After 1998, structural reforms also accelerated in other CSEE countries (some in connection with the progress in their EU accession negotiations), with similar effects on unemployment. In those countries directly affected by war or violent conflict, unemployment levels have risen considerably higher.

Another characteristic of the CSEE group of countries is the excess of registered unemployment over unemployment measured by labour force surveys (LFS) (compare table 3.2.5 with table 3.2.6). In some countries the difference was very small and mostly disappeared with cuts in unemployment benefit. In others (Croatia or Slovenia) it has persisted, pinpointing a certain misuse of public welfare schemes. The difference is sensitive to changes in the incentives to register as unemployed.

The CIS countries have been characterized by a slower but persistent growth in unemployment, as measured by LFS data and by very low levels of registered unemployment (tables 3.2.5 and 3.2.6). The LFS levels are now above 10 per cent and in the countries where there have been conflicts they are considerably higher, although they are still relatively low compared with the huge losses in output. The recent economic recovery in the Russian Federation has led to a decline in open unemployment.

The low and, in a number of CIS countries, decreasing registered unemployment, is mainly attributable to the unwillingness of public labour market institutions to provide meaningful assistance to unemployed persons, primarily because of a shortage of funds. Eligibility rules for registration as a job seeker are set in such a way that many job seekers do not qualify. Jobs reported to public employment services (PES) are usually of poor quality and unattractive for more competitive job seekers, who rely on other channels to find a job. The range of active labour market programmes and the number of jobs on offer are limited. The average level of unemployment benefits is also very low, except for the few who are made formally redundant. Frequent budgetary problems lead to benefits being paid irregularly. In addition, understaffing and low salaries do not motivate PES employees to provide high quality re-employment assistance to job seekers.

A large discrepancy between registered unemployment and LFS data also remains typical of the three Baltic transition countries. In the second half of the 1990s registered unemployment accelerated due to changes in eligibility criteria, so that the two unemployment indicators have edged closer.

(a) Long-term unemployment on the rise

Another troubling aspect of unemployment in transition economies is its long-term nature. According to LFS data, the share of long-term unemployment (over one year) in total unemployment in 1999 exceeded 40 per cent in most countries (with the puzzling exception of 22 per cent in Lithuania) and was as high as 68 per cent in Armenia. Recently, more countries have succeeded in somewhat reducing long-term joblessness, but in the Czech Republic, Estonia and the Russian Federation it has increased considerably (respectively from 31, 33 and 30 per cent in 1995 to 49, 47 and 41 per cent in 2000), indicating the existence of particular groups of unemployed persons with a minimal chance of re-employment. These groups usually combine several

TABLE 3.2.4

Participation rates according to age group in transition economies, 1990 and 1999
(Per cent)

	1990			1999		
	Age group			Age group		
	15-24	25-49	50-64	15-24	25-49	50-64
Albania	59.5	87.7	64.4	..	..	..
Armenia	49.7	90.9	61.3	27.3[a]	85.3[a]	64.7[a]
Azerbaijan	48.8	85.8	56.3	..	..	..
Belarus	52.4	96.1	60.2	..	..	..
Bulgaria	51.9	95.1	55.3	..	..	..
Croatia	45.8	86.8[b]	43.5[c]	40.3[d]	70.5[bd]	23.3[cd]
Czech Republic	57.7	96.0	55.7	48.7	89.3	59.4
Estonia	53.0	95.6	68.5	43.5	88.2	62.2
Georgia	47.3	85.7	65.4	37.2	80.4	75.0
Hungary	51.5	86.0	36.0	40.7	79.0	37.9
Kazakhstan	53.8[e]	93.9[e]	55.7[e]	..	..	..
Kyrgyzstan	50.5[e]	92.3[e]	50.9[e]	..	..	..
Latvia	56.1	95.1	67.4	41.6	87.0	53.1
Lithuania	49.5	93.9	61.9	39.8	92.6	59.8
Republic of Moldova	53.0	94.9	52.4	..	..	..
Poland	44.3	87.3	60.6	37.3	85.0	47.8
Romania	59.8	87.7	42.9	45.8[d]	84.8[d]	58.1[d]
Russian Federation	52.4	95.2	57.7	41.9	87.7	48.8
Slovakia	58.8	95.6	55.3	45.6	89.5	45.6
Slovenia	50.4	93.1	42.0	41.8	91.3	38.2
Tajikistan	49.1	84.5	53.0	..	..	..
The former Yugoslav Republic of Macedonia	44.5	81.4	49.5	38.8	76.6	42.1
Turkmenistan	56.2	88.9	56.1	..	..	..
Ukraine	51.5	94.7	55.5	42.1	86.0	46.0
Uzbekistan	52.5	90.0	51.4	..	..	..
Yugoslavia	45.1	84.9	46.6	..	..	..

Source: ILO, Bureau of Statistics, *Economically Active Population* (Geneva) (data for 1990); labour force survey; official estimates; establishment census; population census; author's calculations.

[a] 1997.

[b] 25-54.

[c] 55-64.

[d] 1998.

[e] 1989.

TABLE 3.2.5

Registered unemployment as a proportion of the labour force in transition economies, 1994, 1998 and 2000 (end-year)
(Per cent)

	1994	1998	2000
Albania	18.0	17.6	16.9
Armenia	6.0	8.9	10.9
Azerbaijan	0.9	1.4	1.2
Belarus	2.1	2.3	2.1
Bulgaria	12.8	12.2	17.9
Croatia	17.3	18.6	22.6
Czech Republic	3.2	7.5	8.8
Estonia [a]	5.0	4.5	6.6
Georgia	3.8	4.2	5.6[b]
Hungary	10.9	9.1	8.9
Kazakhstan	1.0	3.7	3.7
Kyrgyzstan	0.8	3.1	3.1
Latvia	6.5	9.2	7.8
Lithuania	4.5	6.9	12.6
Republic of Moldova	1.0	1.9	1.8
Poland	16.4	10.4	15.1
Romania	10.9	10.3	10.5
Russian Federation	2.1	2.7	1.4
Slovakia	14.8	15.6	17.9
Slovenia	14.2	14.6	12.0
Tajikistan	1.8	2.9	3.0
The former Yugoslav Republic of Macedonia	30.0	41.4	44.9
Ukraine	0.3	4.3	4.2
Yugoslavia	14.2	14.6	12.0[c]

Source: UNECE Common Database and *Economic Survey of Europe, 2001 No. 2*, p. 167; for Estonia: Labour Market Board data.

[a] Job seekers.

[b] 1999.

[c] Excluding Kosovo and Metohia.

disadvantages (low skills, higher age, immobility, health problems, or suffer from employer prejudice), making their placement difficult, even after retraining or participation in temporary employment programmes. An improved labour market situation could increase their chances of re-employment, but their problems increase with longer unemployment spells and need to be tackled more straightforwardly – a need often impeded by the shortage of public funds.

(b) Youth unemployment

Young people, in particular school leavers without work experience, are the group hardest hit by unemployment, despite the sharp decline in their participation rates described in section 3.2(ii). In most transition economies, unemployment rates of young people below the age of 25 are twice as high (or more) than the national average (table 3.2.7). As a rule, the incidence of unemployment tends to decline with age, reaching the lowest levels for the pre-retirement population. This pattern reflects persisting seniority rules and insiders' power, especially in large enterprises, and the frequent willingness of older workers to accept less attractive jobs. It is also partly related to early retirement, pre-retirement arrangements or disability pensions often offered to older workers who are either threatened by redundancy or are already jobless.

(c) A gender perspective on unemployment levels

For women, perceived by employers as less competitive workers due to child raising or care responsibilities, the situation is again ambiguous. Registered unemployment data clearly show higher unemployment levels for women in all transition economies with the exception of Hungary. However, the picture becomes more diverse for LFS unemployment, with rates higher for men than for women in Armenia, Georgia, Hungary, Lithuania, the Russian Federation and Ukraine, while in Bulgaria and Romania the levels are about the same. This disparity is primarily explained by the greater reliance of women on job-search facilities and income support from the PES. It also reflects the greater

TABLE 3.2.6

Total unemployment in selected transition countries, 1994, 1998 and 2000

(Per cent of labour force)

	1994	*1998*	*2000*
Armenia	..	36.4[a]	..
Bulgaria	20.2	14.4[a]	18.7
Croatia	10.0[b]	11.4	13.5[c]
Czech Republic	4.3	7.3	8.8
Estonia	7.6	9.9	13.5
Georgia	..	14.5	13.8[c]
Hungary	10.7	7.8	6.6
Kazakhstan	7.5	13.7	..
Latvia	18.9[d]	13.8	14.4
Lithuania	16.4[b]	13.3	15.9
Poland	14.0	10.5	16.6
Romania	8.2	6.3	7.7
Russian Federation	8.1	13.3	13.4[c]
Slovakia	13.7	12.5	19.1
Slovenia	9.0	7.7	7.1
Ukraine	5.6[d]	11.3	11.9[c]

Source: Labour force survey; official estimates.

[a] 1997.

[b] 1996.

[c] 1999.

[d] 1995.

TABLE 3.2.7

Youth total (labour force survey) unemployment rates in selected transition economies, 2000

(Per cent)

	Youth unemployment rate: population aged 15-24	*National average rate: population aged 15-64*
Bulgaria	39.4	18.7
Czech Republic	17.0	8.8
Estonia	23.7	13.5
Hungary	12.3	6.6
Latvia	21.2	14.4
Lithuania	27.5	15.9
Poland	35.7	16.6
Romania	17.8	7.7
Slovakia	36.9	19.1
Slovenia	16.4	7.1
The former Yugoslav Republic of Macedonia	59.9	32.5

Source: EUROSTAT, *Employment and Labour Market in Central European Countries*, No. 3 (Luxembourg), 2001.

willingness of women than men to take up low-paid, precarious jobs in the public sector, in unprofitable enterprises or in newly created jobs with small private firms operating mainly in services.

(d) Disadvantaged groups

Low-skilled workers are also more affected than average by unemployment. The probability of being unemployed declines with increasing levels of education (although in some countries persons with blue-collar vocational training face even harder unemployment problems than unskilled persons).[156] People with disabilities or health problems and ethnic minorities perceived by some employers as "unskilled" and "unreliable" workers (e.g. Roma) have an extremely high incidence of unemployment, "solved" by many only through inactivity.

(e) Regional disparities in unemployment

Apart from high aggregate levels of unemployment, the transition economies suffer from large regional disparities in unemployment, increasing from county to district level and from district to community level. This springs from the legacy of high levels of concentration of production in large enterprises, which were often the main job providers for an entire region. When these enterprises collapse, regional unemployment climbs. A second factor is the low mobility of the population, which paradoxically has further declined in the course of the transition. Given that attachment to domicile and localized social networks is a characteristic of Europe in general, the even lower rates of mobility in transition economies have been compounded by the privatization of state owned or cooperative houses and flats. Home ownership has strengthened ties to locality. In addition, the price of public transport has increased considerably and many transport connections have been discontinued after the withdrawal of public or enterprise subsidies. Petrol prices have also risen: even if they own a car, many people cannot afford to commute to work in other localities. At the current low level of wages, many who previously commuted have ceased to do so.

The costs of housing also differ considerably by region and have become prohibitive for less competitive workers, who are obliged to stay put in regions with high unemployment, while competitive workers have access to jobs anywhere. Gradually, the quality of the labour supply in depressed regions deteriorates further. This severely limits the prospects for improving regional disparities in unemployment, unless the situation is corrected by a carefully designed regional policy targeting both the supply and demand sides of the labour market.

The above analysis of the trends and structure of unemployment shows that, in the process of transformation, the character of unemployment has changed. In the initial period, unemployment was clearly transitional in character, mainly influenced by the extraordinary depth of the transition crisis and the extent of accumulated labour hoarding. However, it was soon transformed into structural unemployment, as reflected in very high rates of long-term unemployment and the wide regional disparities in employability triggered by a lack of skills, immobility or inflexibility – a situation which persisted even when the economy recovered (although labour demand still remained rather weak).

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[156] The previous narrow specialization of blue-collar vocational professions often makes transfer to other industries (or agriculture) problematic, especially to industries already undergoing restructuring and downsizing. Older age groups, with less opportunity (and often less willingness) to retrain, are most affected.

In the CSEE countries, the level of frictional unemployment is relatively modest due, among other reasons, to well-developed information channels, including the public employment services, which function more effectively than their counterparts in the CIS. Cyclical unemployment is also present in periods of economic downturn but is less relevant. Understanding the nature of unemployment is very important for the formulation of effective labour market policies. Unfortunately, this has not often been the case during the past decade.

In addition to the characteristics and developments addressed above, section 3.3 explores other reasons for cross-country differences in the labour market performance of the CSEE and the CIS transition economies.

3.3 Factors contributing to cross-country differences in labour market developments

(i) Economic and social conditions at the start of transition

From the outset of their political, economic and social transformation, considerable differences existed among the transition economies that were disregarded until recently by many western scholars. First, the CSEE countries were able to benefit from their past experience and more frequent trade contacts with world markets. The shift from eastern to western markets was easier and less painful for domestic enterprises in these countries. In contrast, the shift for non-Russian CIS countries was extremely difficult because, in the framework of the USSR, the limited foreign trade that existed had been exclusively controlled by Moscow. Territorial proximity also played a leading role in finding new external markets for domestic products, helping to preserve more jobs and promising new job openings after economic recovery.

Second, a number of CSEE countries had retained a limited private sector (almost exclusively in the form of self-employment) under the previous regime. For example, in 1989 the share of self-employment was 8.5 per cent in Hungary, 25.7 per cent in Poland and 26.9 per cent in Romania, compared with 1 per cent in the former Czechoslovakia in 1989.[157] Clearly, the CSEE countries benefited from their pre-communist industrial and entrepreneurial tradition, a past that was much more remote for the CIS countries. This advantage reduced the risk aversion of many potential CSEE entrepreneurs who wished to tap into the emerging market opportunities and stimulated job creation in newly established firms.

Third, countries differed in their inherited external and internal imbalances. Heavily indebted countries, such as Hungary and Poland, had to spend a larger share of public finance on debt servicing, which constrained their economic and social intervention, compared with low-indebted countries such as Bulgaria or the former Czechoslovakia. As the Russian Federation took over almost the entire USSR's external debt, the majority of the other ex-Soviet countries started their transition without any external debt. The varying levels of suppressed inflation (low in the former Czechoslovakia and Hungary and high, in particular, in Bulgaria and the CIS countries), and the distortions in relative prices (Hungary was an early starter in correcting price distortions) were immediately reflected in the scale of price increases after price liberalization and were later responsible for the depth of the transition crisis and the decline in labour demand.

Fourth, variations in the age structure and quality of the labour supply were also telling. Compared with non-transition countries at a similar economic level, the average educational qualifications of the labour force were high. Nevertheless, significant differences also existed. These included higher shares of workers with only primary or lower education in non-central European countries compared with central Europe, a very strong secondary education (especially technical) in the Czech Republic, for example, and different proportions of tertiary education in the various countries. These differences influenced the capacity and speed of countries in adjusting production to changing market demands, in attracting foreign investors and upgrading workforce skills to match new labour market needs.

(ii) The role of economic policy

All the transition economies followed the same three key policies advised by the Washington consensus (privatization, price and trade liberalization and macroeconomic stabilization) but varied widely in their pace, extent and modes of implementation. For example, Poland was very rapid in adopting almost complete liberalization of prices combined with currency devaluation and strict macroeconomic austerity measures (only gradually relaxed after 1991), but it was slow in privatization and in structural reform of certain sectors (agriculture, coal mining, steel). This stance helped Poland to overcome the transition crisis speedily and embark on high rates of economic growth – but it also led to increasing structural problems and economic imbalances. These were tackled with a tight monetary policy and an acceleration of structural change after 1998. At the same time Poland introduced four major reforms (to the pension, territorial-administrative, health care and education systems). All these coincident factors, coupled with negative external shocks, have resulted in a significant economic slowdown and escalating unemployment.

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[157] European Commission, Directorate-General for Employment, Industrial Relations and Social Affairs, *Employment Observatory: Central and Eastern Europe,* No. 1 (Brussels), 2001; author's calculations.

Hungary benefited from its early introduction of price and trade liberalization and concentrated mainly on restructuring and privatization of enterprises, relying mainly on direct sales. It also encouraged foreign direct investment through economic incentives. Nevertheless, loose monetary and fiscal policies led to severe macroeconomic imbalances, which necessitated a strict stabilization policy package in 1995. A serious economic slowdown ensued, with further cuts in labour demand. After 1997 economic policies stimulated a rapid economic recovery, eventually leading to limited employment growth and reduced unemployment.

In contrast, the Czech Republic opted for almost complete price and foreign trade liberalization and a steep devaluation of its currency, while relying on voucher privatization and the restructuring of those enterprises with strong ties to domestic state owned banks. This policy, initially successful in promoting structural change in the economy at a relatively low social cost, gradually led to increasing macroeconomic imbalances, the heavy indebtedness of many enterprises and a virtual collapse of the banking sector. An austerity policy package introduced in 1997 resulted in economic recession, escalating layoffs and open unemployment. Recovery was achieved only in 2000.

These three examples of central European countries, considered (along with Estonia, Slovakia and Slovenia) to be the most advanced in economic transition, illustrate the prominent role that economic policy plays in influencing the structure and strength of labour demand and hence the levels of employment and unemployment. Since each country followed its own approach, intrinsically dependent on its own prevailing political climate and conditions, it is difficult to make any valid generalizations. The commitment of national governments to economic reform and sound economic policies has exerted a strong influence on subsequent economic and labour market developments in some countries. However, in those with adverse starting conditions (the greater weight of their communist past, their isolation from foreign markets and more severe economic imbalances), it was far harder to maintain the pace of reform – unless, like Estonia, they were able to benefit from their small size, a favourable popular mentality and strong external assistance.

For most countries, the severe social consequences for the population, coupled with an understandable ignorance of the eventual effects of certain systemic and policy changes and, often, cronyism, led to many inconsistencies in the reform process. In turn, this contributed to the intensification of negative outcomes and the postponement of economic and labour market recovery. One concrete example of reform inconsistency is the oft-cited delay in institutional reforms in CIS countries. This slow progress impeded enterprise restructuring, further weakened the banking system, undermined economic growth and eventually led to mounting internal and external instability and economic crisis.

The combination of a country's initial conditions, other internal factors (the speed and consistency of economic reforms, the orientation of economic policy towards economic growth and the proximity of new markets) and external factors, such as the impact of war or other conflicts and recession in their main trading partners, are responsible for most of the differences in the economic performance of different transition economies. As clearly reflected in varying labour market developments, the central European countries – the Czech Republic, Hungary, Poland, Slovakia and Slovenia – were more successful in resuming economic growth fairly quickly, followed by Croatia, Estonia, Latvia and Lithuania. Bulgaria and Romania were able to recover only later. Most recently, the CIS countries have finally returned to economic growth albeit from rather low levels. Nevertheless, only four countries, with Poland in first place, recently followed by Slovenia, Slovakia and Hungary, have so far been able to exceed their pre-transition levels of output.

Four factors, highlighted below, have had a major influence on the development of employment during the first decade of transition to a market system: the privatization of state owned enterprises; foreign direct investment; new enterprise development; and institutional reforms. A special section (3.3(vi)) compares the outcomes of structural changes initiated by mass privatization, foreign direct investment and small enterprise development.

(iii) Privatization of state owned enterprises

At the start of the economic reforms, rapid privatization of large state owned enterprises was considered the only remedy for the ineffective allocation and utilization of resources in the transition economies. Nevertheless, there were considerable differences among the countries, both in the speed and the methods adopted to implement large-scale privatization. For example, countries such as Estonia and Hungary relied primarily on the direct sale of large and medium-sized companies to foreign investors, a process which was relatively transparent and generated considerable revenues for state budgets. Insider buyouts by employees and managers were the second (but much less frequent) method of privatization and concerned only smaller and less important firms. Although direct sales of companies were originally considered to be very slow, they turned out to be the most successful route to privatization. Besides generating income for the state they also brought additional investment capital to the companies involved and contributed to their longer-term prosperity.

(a) Fast privatization

The Czech Republic, Lithuania and Slovakia (in the first round of privatization) opted for mass privatization through the distribution of vouchers to the population. While this approach was seen as very rapid and fair, it produced an extreme dispersion of ownership with little control over enterprise managements. It generated neither revenue for the state nor new capital for enterprise development. In order to meet the needs of restructuring production and upgrading technologies, enterprise managements turned to the state banks for investment credits. In many enterprises, managements were also interested in buying out the remaining shares owned by the state or the shares managed by investment funds (where small private shareholders had placed their shares for management) and obtained credits from the banks for such purchases. However, enterprise profits were too low to maintain the servicing of loans and most bank credits became "non-performing". They then became a heavy burden on the portfolios of state banks and brought the enterprises – many with viable production programmes – to financial collapse. Managers indulged in rent-seeking and sought the transfer of assets to their own firms, thereby depriving enterprises of scarce financial resources and accelerating their collapse. In addition, the poor protection of small shareholders meant that the ultimate benefits of voucher privatization were very limited.

The CIS countries, in particular the Russian Federation and Ukraine, used subsidized management-employee buyouts of firms as their main method of mass privatization. This route to privatization was also very fast. But it generated little revenue for the state, no new investment capital for enterprise and led to a system of corporate governance, which was no more efficient than its ex-Soviet counterpart. Compared with the previous group of countries, the only difference was the greater influence of employees on hiring and firing within the enterprise. Such influence led to much higher levels of labour hoarding and employment than was the case for enterprises with similar economic performance in other countries. Enterprise managements engaged in asset stripping and the exclusion of other owners (primarily workers), while foreign investors were not interested in injecting capital into enterprises with non-transparent forms of ownership.

(b) Slow privatization

In contrast, Bulgaria, Poland, Romania and Slovenia were slow privatizers of their large state enterprises. Slovenia and to a large extent Poland succeeded in commercializing and restructuring these enterprises and putting them under hard budget constraints. Bulgaria and Romania continued to subsidize them (although Bulgaria had to stop this practice with the introduction of the currency board in 1998). The efforts of Poland and Slovenia led to a substantial improvement of enterprise corporate governance, resulting in better enterprise performance but at the cost of massive job destruction and the reduction of overstaffing.

Of particular consequence was the privatization of the ailing banking sector, heavily undercapitalized and burdened by non-performing loans to state enterprises. The collapse of the banking sector was behind the economic crisis in Bulgaria in 1996 and the Russian financial crisis in 1998 (although in both cases the fundamental causes were structural and institutional, as explained below). Capital flight through the banking sector was huge in the region and the subsidization of state or semi-state banks was extremely expensive for the state budget (it cost the Czech budget, for example, several hundred billion koruna).[158] The entry of foreign banks into the domestic banking sectors has been indispensable for strengthening their capacity to provide credit to enterprises and for improving their governance, while many newly established small banks have collapsed.

(iv) Foreign direct investment

The transition economies differ widely in the total amount of foreign direct investment (FDI) they have attracted. To date, Poland has received the largest amount of FDI in the region (on a cash basis, $28.5 billion in 1990-2000).[159] However, in terms of the cumulative inflow of FDI per capita over the same period, the leading recipients were the Czech Republic ($2,200) and Hungary ($2,100), followed by Estonia ($1,680), Croatia ($1,055), Latvia, Slovenia, Slovakia and Poland. Until 1997 only Hungary could boast a significant inflow of FDI per capita, but since 1998 the largest inflows have been to the Czech Republic and Poland. These are related to the accelerated privatization of state owned infrastructure companies and state banks; considerable FDI has also gone into greenfield investment. The effect of FDI on job creation and job preservation, both by foreign owned enterprises and their domestic suppliers and collaborators, is indisputable, although the entry of FDI has also led to some job destruction – through cuts in labour hoarding, the exclusion of less profitable domestic competitors or the replacement of less competitive domestic suppliers by imports from abroad. The flow of FDI to a country depends on several factors: its political and economic stability; its progress in EU accession negotiations; its proximity to the parent company abroad; the incentives provided for foreign investors; market prospects; and the expected profitability of the investment project, which is influenced by access to cheap and skilled labour. Obviously, the central European accession countries are much better off than the rest of the region and they have benefited considerably in terms of new job creation and the preservation of existing jobs.

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[158] At 2002 exchange rates: $1 = CZK36.2.

[159] This and the following figures are taken from UNECE, *Economic Survey of Europe, 2001 No. 2*, appendix table B.17.

TABLE 3.3.1

Self-employment as a share of total employment in selected transition economies, 1993 and 2000

(Per cent)

	1993			2000		
	Men	*Women*	*Total*	*Men*	*Women*	*Total*
Bulgaria	12.9	9.2	11.2	18.3	10.6	14.7
Croatia	25.1[a]	15.4[a]	20.7[a]	23.3[b]	14.4[b]	19.2[b]
Czech Republic	15.8	9.4	12.8	18.8	9.0	14.5
Estonia	10.4	6.2	8.4	9.7	6.4	8.1
Hungary	17.4	11.3	14.6	18.7	9.6	14.6
Kazakhstan	0.1[c]	0.2[c]	0.1[c]	..	..	..
Latvia	12.4[d]	6.9[d]	9.8[d]	12.5	8.4	10.5
Lithuania	21.5[e]	14.6[e]	18.3[e]	19.2	12.7	15.9
Poland	32.2	29.9	31.2	25.9	18.4	22.5
Romania	24.4	19.4	22.1	32.6	17.4	25.4
Russian Federation	10.1[f]	5.6[f]	8.0[f]	8.4	6.2	7.4
Slovakia	9.0	3.5	6.6	10.9	4.1	7.8
Slovenia	16.0	7.6	12.2	15.3	6.5	11.2
The former Yugoslav Republic of Macedonia	74.0[g]	68.5[g]	71.8[g]	..	..	..
Ukraine	..	..	..	8.3[b]	9.0[b]	8.6[b]

Source: Labour force surveys; author's calculations.

[a] 1996.

[b] 1999.

[c] 1989.

[d] 1995.

[e] 1997.

[f] 1991.

[g] 1994.

(v) Small enterprise development

The small enterprise sector has been identified as the main source of new jobs in the transition economies. It has developed partly in the wake of the restructuring of large enterprises, when a number of ancillary production and service activities were externalized, usually resulting in higher productivity both in the original enterprise and in the new unit. Many new firms also emerged as a consequence of the opening of new market opportunities, creating jobs not only for their owners but also for wage earners. At the same time a number of own-account workers were pushed into independent activity by the impossibility of finding decent work. A large share of such own-account activities has remained hidden in the informal sector, which expanded strongly in the initial transition years but later declined, at least in central Europe.

The reasons for developing own-account activities vary, as does the quality of the new jobs in small enterprises: they range from highly-qualified and lucrative jobs to those supporting barely subsistence levels of income (usually in farming and services). Employers also often force workers to accept own-account status, particularly in small firms economizing on social contributions. Most transition countries have introduced programmes to promote small enterprise development. Their success has also varied, depending on the overall business environment, which has been more favourable in central Europe but much less so in south-eastern Europe and the CIS. Accordingly, there is a close correlation between the share of self-employed workers (table 3.3.1), a country's economic performance and its labour market situation, which again differentiates central Europe from south-eastern Europe and the CIS.[160] There is also a considerable gender gap in favour of men in self-employment in all the transition countries, a gap which increased in most countries between 1993 and 2000.

(vi) Comparing labour turnover and job turnover

Economic and social reforms have led to a substantial increase in labour market flows. Labour turnover (table 3.3.2) reflects the speed of reallocation of labour in the economy, which may result from the relative dynamics of job creation and job destruction, as well as from employed persons changing jobs and moves from unemployment and inactivity into employment and vice versa.[161] In theory, structural change relates only to the process of job creation and job destruction, while labour turnover in excess of job turnover, sometimes called "labour churning", points to labour mobility connected with other, non-structural reasons. Given the significant differences between transition economies regarding the extent and speed of restructuring and privatization of large state enterprises, the inflow of FDI, and small enterprise development, it is interesting to look first at their labour turnover trends and, second, to compare the relative importance of the structural component in total labour reallocation (table 3.3.3).

As expected, table 3.3.2 reveals a substantial increase in labour turnover in the early stages of transition followed by a decline and stabilization. In each country, periods of sudden increase emerge, a result of renewed labour turmoil connected with economic imbalances and remedial policy packages. Rather surprisingly, Bulgaria and the Russian Federation had the highest rates of labour mobility over the 1990s. Labour turnover was also high in Estonia and Poland, while in the Czech Republic (after 1993), Slovenia and Ukraine it was markedly less.

The comparison between labour turnover and job turnover provides an indication of the importance of structural change in explaining intercountry differences in labour mobility. For example, Estonia is characterized by relatively high job turnover, which accounted for almost 40 per cent of overall labour mobility in the period under

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[160] The remarkably high levels of self-employment in Poland and Romania are due largely to agriculture, based mainly on small family farms.

[161] For detailed notes on the database used in this section, as well as a discussion of labour turnover, accession and separation rates by country, see S. Cazes and A. Nesporova, *Towards Excessive Job Insecurity in Transition Economies?*, ILO Employment Paper, No. 2001/23 (Geneva), 2001.

TABLE 3.3.2

Labour turnover in selected transition economies in the 1990s

(Per cent)

Country labour turnover	*Source*	*1990*	*1991*	*1992*	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*	*1999*	*2000*
Bulgaria	ES	48.9	50.9	43.7	45.0	43.9	43.4	46.1	59.3	55.8	67.5	..
Czech Republic	LFS	..	..	..	44.5	36.1	30.3	24.8	24.7	22.3	..	..
Estonia	LFS	30.8	38.4	54.4	55.6	55.3	31.0	42.9	36.2	35.0	..	..
Poland	ES	35.2	42.9	40.3	41.6	41.7	45.2	47.3	37.1	47.4	..	..
Poland	LFS	..	..	35.7	44.1	54.2	47.1	53.4	40.1	38.2	..	..
Russian Federation	ES	..	..	49.8	46.2	48.2	48.3	42.8	44.4	45.9	48.7	
Slovenia	ES	27.1	34.2	31.6	32.2	32.0	31.4	31.2	29.3	28.8	31.1	30.1
Ukraine	ES	..	..	..	..	..	38.8	37.6	35.3	35.2	37.4	..

Source: S. Cazes and A. Nesporova, *Towards Excessive Job Insecurity in Transition Economies?*, ILO Employment Paper, No. 2001:23 (Geneva), 2001.

Note: ES = establishment survey; LFS = labour force survey. Labour turnover is calculated as a ratio of the sum of hirings and separations during the year to the initial employment level in that year at establishment level, or as a sum of aggregate changes between employment and unemployment and employment and inactivity, as well as changes in employment from one job to another over the year, divided by initial employment in that year.

TABLE 3.3.3

Comparison of labour turnover and job turnover in selected transition economies, 1994-1997

(Per cent)

	Labour turnover	*Job turnover*	*Share of job turnover in labour turnover*
Bulgaria	48.2	8.1	16.8
Estonia	41.4	16.0	38.6
Poland	42.8	8.5	19.9
Russian Federation [a]	48.2	6.5	13.5
Slovenia	31.0	9.5	30.6

Source: Labour turnover data as for table 3.3.2; job turnover data for Bulgaria, Estonia, Poland and Slovenia from G. Faggio and J. Konings, *Job Creation, Job Destruction and Employment Growth in Transition Countries in the 1990s*, LICOS (Leuven), 2000. For the Russian Federation from V. Gimpelson and D. Lippoldt, "Labour turnover in the Russian economy", *OECD Proceedings: Labour Market Dynamics in the Russian Federation*, OECD (Paris), 1997.

Note: Labour turnover is defined in table 3.3.2. Job turnover is the sum of changes in the number of jobs in individual establishments, i.e. the sum of all employment gains from new or expanding establishments and all employment losses from closed down or declining establishments. For details concerning the calculation of job turnover data in this table see source.

[a] Only 1994-1995.

review. This supports the view that liberal economic reforms have accelerated the structural adjustment of the economy, resulting in the highest achieved economic growth in the region – although not in any employment recovery. A second case in point is Slovenia. Frequently criticized for the slow restructuring of its large state enterprise sector, this country in fact has the second highest rate of job turnover among the five countries analysed (table 3.3.3). Structural changes also explain the favourable economic development of Slovenia in the 1990s, often puzzling those experts who considered its low labour turnover as symptomatic of its slow pace of economic transformation.[162]

In contrast, low job turnover in Bulgaria and the Russian Federation is clear evidence of delayed restructuring of the enterprise sector, resulting in poor economic performance in both countries. The wide gap between job turnover and very high labour turnover should thus be attributed to the excessive movement of workers among low productive and poorly remunerated existing jobs rather than to any positive reallocation of labour towards progressive industries and new enterprises. Rather surprisingly, Poland was also close to these two slow reformers both in terms of low job turnover and its small contribution to labour mobility. One reason for the Polish result is that only large and medium-sized enterprises, experiencing economic problems due to delayed restructuring and privatization, were included in the survey used for calculating job turnover, while many newly established (and often small) firms were omitted. Thus, the data more accentuate the temporary slowdown of the restructuring of large and medium enterprises rather than the acceleration of the new private sector, which was the driving force of high economic growth in the analysed period.

(vii) Institutional reforms

While all the transition countries have made legislative changes and restructured institutions to conform to a market system, progress has been unequal. The reasons for this unequal development are numerous: the lack of experience of legal experts unfamiliar with the functioning of a market system; ideological expectations that the state should cease intervening in the enterprise sector and its macroeconomic environment as much as possible (in the belief that free market forces would cure all ills); the misjudgement of international advisers in underestimating the importance of institutional reforms while emphasizing one-sided economic reforms; political instability impeding the progress of legal and institutional reforms; cronyism; and the determined opposition of some politicians and the new rich to the introduction of legislation to curtail profiteering from the privatization of state property. In the Czech Republic, for example, the inadequate protection of small shareholders in mass privatization was a direct consequence of a weak legal environment, seriously undermining the only advantage of voucher privatization, namely, its original fairness in distribution to the population.[163]

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[162] M. Vodopivec, "Studying labour market flows in a transition period", paper presented at the OECD Workshop *The Use of Labour Force Surveys in Policy-making* (Tallin), 27-28 October 1997.

The perception by western investors of the weak legal protection of property rights in many transition economies, particularly in the CIS, has been the main reason for the slow inflow of FDI to these countries, despite the promise of high returns on investment. The 1998 *Economic Survey of Europe* argued forcibly that the Russian financial crisis of August 1998 was the result of a poor rate of economic restructuring and adjustment of the enterprise sector caused (among other factors) by a weak institutional framework. It concluded that any macroeconomic stabilization without deep structural and behavioural changes in the enterprise sector, backed up and stimulated by appropriate institutional reforms, would be unsustainable and short-lived.[164] In contrast, improvements in legislation and the strengthening of market institutions in the process of preparing for EU accession are behind the recent acceleration of FDI into central Europe. Reforms to labour market institutions and their impact on employment are evaluated below.

(viii) Labour supply factors

(a) Demographic factors

Labour markets have also been considerably affected by demographic changes. The 1990s, particularly in the first half, were characterized by a large increase in the entry of young people aged 15-25 years into the labour market.[165] This coincided with significant changes in the demand for skills and the depreciation of work experience due to massive restructuring in the CSEE (much less so in the CIS), which favoured young, skilled workers. However, after the initial wave of restructuring, employers renewed their demand for prime-age workers with work experience. As noted earlier, lagging national educational reforms have responded inadequately to changing labour market needs; often schools and training centres are providing education which is no longer demanded by the market. As job creation still remains low, school leavers without work experience are increasingly confronted with unemployment. Some have responded by staying longer in education.

Another demographic factor of significance in the transition countries is a sharp decline in fertility rates. The reasons for this include the falling incomes of young families, housing problems faced by young people and women's fear of losing their jobs (because of the demands of child-raising). New career opportunities for women are also a factor in lower fertility rates. In the short term, the consequence has been fewer women on maternity/parental leave; in the long term, it will contribute to a more rapid ageing of the population.

In the initial years of economic transition, there was also an increase in mortality and morbidity rates in the non-central European transition economies, due to declining expenditure on health care as a result of state budget cuts and shrinking incomes. An increasing health problem is the high levels of stress caused by unemployment and poverty.[166] This may be one cause of the substantial growth in disability pensions among older workers (the other, more importantly, is the "solving" of labour market problems of older workers, especially those with poorer health, by offering them disability pensions).

(b) Effects of education

As mentioned in section 3.3(i), the transition economies have high average levels of education compared with countries at similar levels of economic development (see table 3.3.4 for the population aged 15-64). Although cross-country comparisons of education levels are imprecise because of wide variations in national education systems, table 3.3.4 indicates substantial differences among countries in the shares of the population with only primary education: these are very low, for example, in the Czech Republic and Estonia but much higher in Bulgaria and Romania. Low-skilled workers face the hardest problems in the labour market, owing to their limited ability to adjust to new technologies and new methods of work. Similarly, there are large differences in the share of population with secondary education, which is very high in the Czech Republic, Poland and Slovakia. In contrast, tertiary education levels are considerably higher in Estonia and Lithuania compared with the other transition economies. If supported by a favourable development of human resources, this signals a large development potential for these two countries.

The traditional, extremely narrow specialization of vocational education that distinguished the transition economies in the past has left a legacy of large numbers of blue-collar workers with obsolete skills – a problem

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[163] A theoretical assumption – in practice, people had unequal access to information concerning both the actual economic situation and the market price of the enterprises participating in voucher privatization.

[164] UNECE, *Economic Survey of Europe, 1998 No. 3*, p. 12.

[165] In Poland, unlike many other transition economies, the proportion of persons aged between 15 and 24 in the total population increased over the whole decade. This is often cited as one explanation for accelerating unemployment after 1997 and an exceptionally high youth unemployment rate (more than double the national average).

[166] For more on this aspect, see G. Cornia and R. Paniccia (eds.), *The Mortality Crisis in Transitional Economies* (Oxford, Oxford University Press, 2000). In this connection, a large fall in the life expectancy of males in the Russian Federation, from 64.2 years in 1989 to 57.6 years in 1994, is often cited. Although life expectancy recovered in all the transition countries after 1995, in many of them it still remains below pre-transiton levels.

TABLE 3.3.4

Composition of the population, aged 15-64, according to education level, in selected transition economies, 2000
(Per cent of total population)

	Level of education		
	Primary	*Secondary*	*Tertiary*
Bulgaria	43.9	42.7	13.4
Czech Republic	23.8	67.0	9.1
Estonia	26.2	51.3	22.5
Hungary	38.5	50.3	11.2
Latvia	30.6	55.3	14.1
Lithuania	31.3	36.8	31.9
Poland	33.1	58.3	8.6
Romania	43.2	49.9	6.9
Slovakia	28.8	63.5	7.6
Slovenia	33.9	53.9	12.1

Source: EUROSTAT, *Employment and Labour Market in Central European Countries* (Luxembourg), 2001.

that has emerged across-the-board and has been dealt with inadequately everywhere. Adult education is insufficiently developed, not only in the training of unemployed job seekers, who comprise only a fraction of those in need of skills upgrading, but also in training workers threatened by unemployment or requiring an upgrading of skills to enable them to work with new technologies. Under the previous regime, enterprises provided such training to staff. New, hard budget constraints have forced many enterprises to close these facilities and to look for skilled workers in the labour market instead of investing in their own workers.

(ix) The role of employment protection legislation

National labour legislation was substantially and repeatedly amended in the transition to a market system. The objective is to facilitate workforce adjustment for firms, in order to make enterprises more flexible and economically competitive, while guaranteeing solid employment protection for workers. Under the previous centrally planned system, workers enjoyed a fairly high degree of employment protection. The amended employment protection legislation (EPL) substantially moderates workers' protection, both in current jobs and in the case of redundancy.

What is the overall effect of this new EPL on employment and unemployment in general and in regard to specific social groups? The first results from an ILO cross-country analysis of the strictness of EPL and its labour market effects reveal that on average the position of the transition economies is around the EU average and slightly above that of the OECD countries.[167] Here again, there are significant differences among the transition economies: Hungary and Poland have the least restrictive EPL and the Russian Federation and Slovenia (the former until January 2002) have the most restrictive. In fact, if the latter two countries are excluded, the average of central and east European countries is even below that of the EU. Moreover, outside the central European economies the enforcement of labour legislation remains weak.

The labour market implications of EPL

Preliminary results show that the strictness of EPL has no impact either on the overall level of unemployment or on youth unemployment and is only weakly associated with employment rates and the share of self-employment. However, it does appear to increase the share of temporary jobs in total employment. The link between EPL and labour market dynamics (i.e. flows between employment, unemployment and inactivity) appears stronger. Stricter EPL tends to contribute to lower rates of labour turnover. It does not lead to longer job tenure, but it is strongly associated with smaller flows into, and longer spells of, unemployment. In sum, the impact of EPL on labour market developments in the transition economies tends to be somewhat limited but not insignificant, especially as regards the speed of transition between employment, unemployment and inactivity.[168]

(x) The effects of labour market policy

Labour market policy is applied to facilitate the transfer of workers between jobs and between employment, unemployment and inactivity, and to balance labour supply with demand. In all transition economies, labour market policy (active and passive) was introduced in tandem with economic and social reforms. Unemployment benefit systems were originally rather generous, both in terms of eligibility rules and the amount and duration of benefits: such generosity was based on the assumption of a transitory character of unemployment. When unemployment rates accelerated rapidly and remained high, the rules and benefit levels were made considerably more restrictive in order to economize on limited resources and encourage job seekers to take up new jobs.[169]

(a) Passive policy

The coverage of registered job seekers by income support and the average replacement rates of unemployment benefits for 1998 are given in table 3.3.5. In general, the share of benefit recipients among

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[167] S. Cazes and A. Nesporova, "The impact of employment protection legislation on labour market outcomes: the evidence from CEE and OECD countries", a paper presented at the ILO Regional Tripartite Seminar on *Labour Market Flexibility and Employment Security in Transition Countries* (Budapest), November 2001. This work is currently being further elaborated by these two authors and will be published in a forthcoming book on labour market flexibility and employment security in transition countries. Employment protection legislation covers the regulation of both permanent and time-limited employment and the analysis uses OECD methodology.

[168] S. Cazes and A. Nesporova, "The impact of employment ...", op. cit.

[169] For a detailed discussion of labour market policy, its formulation, implementation and outcomes, see A. Nesporova, *Employment and Labour Market Policies in Transition Countries* (Geneva, ILO, 1999).

TABLE 3.3.5

Recipients of unemployment benefits and replacement rates in selected transition economies, 1998
(Per cent)

	Share of benefit recipients in registered unemployment	*Average benefits in relation to average wage (=replacement rate)*
Bulgaria	24.8	29.0[a]
Czech Republic	48.8	24.0[a]
Estonia	59.3	7.5
Hungary	73.9	27.5[b]
Poland	23.1	36.0[c]
Russian Federation	89.5	..
Slovakia	27.0	32.8
Slovenia	32.6	43.9
Ukraine	53.1	22.7[d]

Source: C. O'Leary, A. Nesporova and A. Samorodov, *Manual on Evaluation of Labour Market Policies in Transition Economies,* ILO (Geneva), 2001.

a 1997.

b 1999.

c March 1996.

d December 1999.

registered job seekers is rather low, ranging between 23 and 49 per cent for the CEECA countries. The higher shares for the CIS countries and the Baltic states reflect lower registration of unemployed persons at public employment services; the proportion of benefit recipients in total unemployment would thus be even lower than in the CSEE countries. The replacement rate of benefit in relation to the average national wage, reached at best a maximum of one third in 1998, making it unlikely that unemployment benefits per se would discourage recipients from taking up a job, were one available.

Nonetheless, the unemployment problems of older workers and workers with disabilities have often been resolved by offering them early retirement, pre-retirement benefits or disability pensions, as noted earlier. While workers themselves usually welcome this solution, it is expensive and a burden on state budgets. In addition, a number of discouraged job seekers, particularly those with lower skills, lower pay and, often, with health problems, have opted to live on social welfare, usually in combination with extra income from subsistence farming and informal casual activities. Policy makers and social policy experts have debated this issue frequently in the recent past, preferring to cut social benefits and push such workers back into the labour market. Here the problem is the lack of low-skilled regular jobs available and the very low wages offered, which do not compensate for the additional costs of taking up such jobs.[170] Cuts in social welfare would simply lead to further deprivation of low-skilled or disadvantaged groups without forcing them into employment.

(b) Active labour market policy

In all the transition economies, public employment services were established at the start of economic and social reforms and they play a significant role in assisting job seekers searching for re-employment. In 1998 the share of registered job seekers placed in new jobs with the assistance of public employment services ranged from between 19 per cent in Ukraine to 63 per cent in the Russian Federation. Labour market experts estimate that on average about one third of job placements were through public labour offices, which may not appear high but such assistance is important for less competitive groups of workers.

Apart from job mediation, these countries have designed and implemented a number of active labour market programmes, ranging from vocational training, job creation measures and subsidized employment to mobility promotion. At their inception, due to the lack of experience and skills of PES staff, problems arose with the formulation, targeting and application of these programmes, and re-employment rates after their completion were initially low. With accumulated PES staff experience, however, the outcomes of active labour market programmes have considerably improved over time. Nevertheless, the biggest problem is financial, and this remains. National employment funds are already stretched to pay benefit entitlements and to combat high levels of unemployment: what is left to spend on active labour market policies is very modest. Table 3.3.6 illustrates this, but it also shows large differences among countries in the amount of funds devoted to various labour market problems and the share allotted to active policies. Table 3.3.6 does not show a correlation between labour market policy expenditure and registered unemployment (as is usually the case) but to LFS unemployment. There is only a weak correlation between the level of expenditure on labour market policies and the size of labour market problems.

(xi) The interaction with social policy

Besides income support in unemployment, early retirement and disability pensions, the level of social benefits and assistance may also have an important effect on the decision to withdraw from or return to the labour market. For example, in the CIS and south-east European countries the level of social welfare is low in general, whereas studies of the Czech Republic or Estonia show that for a family with low-wage earners, the difference between income from employment and income from social transfers is negligible, and that it moves in favour of the latter when job take-up costs (such as transport, clothing, etc.) are taken into account.[171] These two

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[170] The oft-proposed solution of decreasing the minimum wage in countries such as Poland or Slovenia, in order to stimulate the creation of new jobs for low-skilled workers, is thus unlikely to improve the situation.

[171] See e.g. J. Vecernik, *Labour Market Flexibility and Employment Security: Czech Republic,* ILO Employment Paper, No. 2001/27 and R. Arro, R. Eamets et al., *Labour Market Flexibility and Employment Security: Estonia,* ILO Employment Paper No. 2001/25 (Geneva), 2001.

TABLE 3.3.6

Expenditure on labour market policy per unemployed person in selected transition economies, 1998

	Total expenditure		*Expenditure on active labour market policies*	*Expenditure on income support*
	GDP (per cent)	*Per unemployed* [a]		
Bulgaria	0.8	0.056	0.007	0.029
Croatia	0.6	0.053	0.002	0.042
Czech Republic	0.4	0.055	0.007	0.036
Estonia	0.2	0.020	0.007	0.010
Hungary	1.3	0.167	0.036	0.117
Poland	1.0	0.095	0.028	0.056
Russian Federation	0.2	0.015	0.002	0.010
Slovakia	1.1	0.088	0.026	0.044
Ukraine	0.3	0.027	0.003	0.017

Source: Data on labour market policy spending: C. O'Leary, A. Nesporova and A. Samorodov, *Manual on Evaluation of Labour Market Policies in Transition Economies*, ILO (Geneva), 2001; labour force survey unemployment rates: table 3.2.6; author's calculations.

[a] Ratio of GDP spent on labour market policies to labour force survey unemployment rate (both in percentage terms) including spending on active policies and on income support. The difference between column 3 and columns 4 and 5 relates to the costs of running national public employment services.

countries have recently increased the minimum wage to make employment a more attractive alternative to living on social welfare.

CSEE and CIS countries: two models of labour management

For the purposes of this paper, two different models of labour management may be broadly distinguished in transition economies. The CSEE countries have opted for a model that shifts responsibility for supporting redundant workers from enterprises to public institutions. Enterprises have reduced considerably their human resource and social service programmes for workers. Firms often prefer to recruit new workers with the desired work experience than to invest in the retraining of their own staff or to hire school leavers without work experience. For income support and re-employment assistance, these countries rely on public employment services. They have therefore liberalized EPL, introduced unemployment benefit systems, reshaped their social welfare systems and launched active labour market policies – although there are significant differences in the quantity and quality of assistance offered.

The CIS countries, in contrast, continue to rely mainly on employment protection within enterprises, while assistance provided by public employment services is relatively poor. As EPL is rather restrictive, employers opt for other forms of workforce adjustment, such as short-term work, administrative leave or delayed payment of wages. Given the weak demand for labour coupled with the inferior quality of available vacant jobs, this solution appears more acceptable to all parties. Employers can adjust labour costs to their economic situation and they do not destroy the work-teams they will need when demand recovers; workers do not lose jobs that provide at least some income (which they complement with income from other sources) and they maintain access to the social services provided by their enterprise. And governments avoid the social unrest generated by unemployment and poverty.

The CSEE model leads to a more effective allocation of labour among sectors. This results in increased labour productivity but may lead to higher unemployment and lower participation rates. The CIS model tends to moderate labour reallocation to new and more productive enterprises and occupations, but employment levels are in general higher and unemployment rates lower.

(xii) The impact of income policy

The transition economies inherited low levels of money wages and rather low wage differentials. This was due to their fairly rigid central pay systems in which wages were set more as a function of the industry and type of work than of skill requirements, employee performance or the economic performance of the enterprise. Economic reforms gradually replaced centralized wage tariff systems with wage determination based on collective bargaining in the enterprise sector, while a universal tariff system was maintained in the budget-funded sector. Most countries have also introduced a minimum wage as a basis for the wage tariff system in both the budget-funded and the enterprise sectors but often also for calculating minimum social benefits. In many countries, the minimum wage has fallen well below the subsistence minimum, thus losing its social and economic function.

In line with price liberalization, governments also introduced economic stabilization programmes in which a key role was attributed to a tax-based income policy, controlling wage increases above a specified level through the imposition of a punitive tax. The aim of this policy, imposed in most countries on state owned enterprises, was to link wage increases more closely to enterprise performance and to break or avoid a price-wage inflation spiral. The direct consequence of such a policy was a sharp fall in real (consumer) wages, equal in 1993 to around 80 per cent of their 1989 level in the Czech Republic, 71 per cent in Poland, 66 per cent in the Russian Federation and 38 per cent in Ukraine. Wage regulation had contributed to the disconnection of wages and productivity: the more profitable enterprises were not allowed to increase wages, while those performing poorly increased their wages to the maximum, under pressure from their workers. Low wages thus contributed significantly towards the delay in enterprise restructuring. They helped to maintain redundant workers in large enterprises, while the more productive enterprises were unable to attract workers with significantly higher wages. Moreover, monopolistic enterprises, mainly in the extraction, metallurgy and energy industries, converted their profits (artificially inflated by price increases) into higher and a more rapid growth of wages than in other industries, regardless of actual productivity. In addition, particularly in the CIS countries, huge wage arrears emerged as a consequence of the collapse of demand and the heavy taxation of enterprises. A credit squeeze, induced by restrictive monetary and fiscal policies, deprived enterprises of working capital, and cuts in government spending resulted in mounting wage arrears, including in the budget-funded sector. Wage regulation was eventually moderated and finally abolished, leading to a more rapid recovery of real wages. Nevertheless, real consumer wages in 2000 had exceeded their 1989 level only in the Czech Republic.

(xiii) The effect of collective bargaining

During the past decade the majority of transition countries have moved towards a collective bargaining system. The percentage of workers covered by collective agreements is fairly high in the public sector and in large private firms. Workers in medium-sized and small firms are rarely unionized. Collective bargaining usually concentrates on negotiating wages and working conditions. Employment issues are of less importance, the focus being more on compensation in the event of redundancy rather than on its prevention. Major exceptions are the coal mining and steel industries, where strong trade unions have opted for strike action, temporarily blocking mass dismissals in order to obtain large severance payments. In the CSEE countries, EPL usually only stipulates that the relevant trade union be informed of redundancy intentions. In a number of CIS countries, trade unions are required to agree to layoffs (which may, and in the past did, effectively prevent redundancies) and enterprise managements are obliged to turn to alternative cost reduction measures, such as forced leave or non-payment of wages. In Poland and Romania, for example, the power of trade unions has been translated into increased protection of jobs in enterprises. In addition, privatization deals, particularly in Poland, have included temporary bans on mass redundancies. The expiry of such privatization clauses after 1998 was one reason for the rapidly increasing unemployment in Poland.

3.4 Suggestions for policy improvement

The important question for policy makers in transition countries is how and in which direction to refocus current economic, employment and social policy to better stimulate employment growth and reduce the persistently high levels of unemployment. Some ideas for a possible policy redirection are outlined below.

First, it is vital to put employment goals at the centre of economic and social policy and to make full, productive and freely chosen employment an overall objective of national macroeconomic strategies and policies. Undeniably, economic growth is a necessary condition for boosting new job creation and increasing wages and incomes – but it is not sufficient per se. Macroeconomic policy should promote an economic growth that generates enough jobs for all those who want to work. These jobs should be of good quality, be safe for workers' health and provide a sustainable livelihood for workers and their families; in short, decent work – a leading item on the ILO Global Employment Agenda.[172]

As the primary engine of economic growth is investment, governments must foster a stimulating environment for private investment by ensuring that legal rules and market institutions are transparent and sufficiently stable and that property rights are protected. Simultaneously, governments should directly invest in the social and technical infrastructures that best promote productivity growth, enhance returns to private investment and thus attract new investors, both domestic and foreign.

New jobs are now mainly created by foreign direct investment through the privatization of existing enterprises or the setting up of new firms (independent, or the subsidiaries of foreign companies). Governments of many transition countries are competing with each other to provide preferential treatment for FDI, and thereby increasingly provoking criticism from the European Union. Other critics are closer to home: domestic investors complain they are discriminated against in favour of foreign investors. Governments need to reconsider their policies in this domain. A more balanced policy must be based on ensuring sound legal, economic and social conditions for investment and a fair approach to all investors. Optimal use needs to be made of the comparative advantages of these countries, located primarily in their skilled and still cheap labour. The need for reviving the depressed regions that exist in all the transition economies makes the application of such preferential policies for attracting external investors conditional upon public investment in upgrading both technical infrastructure and workers' skills in such regions.

The second important source of new job creation is the small enterprise. Many small firms and self-employed persons are locked in low-productive activities because the lack of skills and capital forestalls their benefiting from new technologies or from expansion. Small entrepreneurs also suffer more than larger firms from bureaucratic regulations and high taxes. New policies promoting small enterprise development should address these obstacles. Besides creating a favourable business environment in general, governments must simplify the tax and administrative rules affecting small firms. They must enhance the access of small entrepreneurs to capital, facilitate their adoption of new technologies, and support the improvement of managerial and technical skills of entrepreneurs and their employees. Large firms, especially foreign owned, should be encouraged to increase their links to domestic suppliers and help them to upgrade their production if necessary.

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[172] ILO, *Global Employment Forum* (Geneva), 1-3 November 2001.

The formulation and implementation of economic, employment and social policies cannot be left solely to governments. Success requires the close collaboration of all concerned, involving the social partners to ensure that different interests are reconciled and the benefits fairly shared.

Technological changes and product innovations require rapid adjustment on the side of producers in order to retain or extend their market shares against sharp and increasingly global competition. Adjustments concern both tangible assets and human capital – meaning the size of the workforce, its skills, productivity and costs. Employers require greater labour flexibility, mobility and productivity; workers need reasonable security and motivation in order to accept and respond to change. Here, governments have a key responsibility: to reform their provision of education and training, both for youth and adults, which will meet labour demand and enable workers to maintain and improve their employability through lifelong learning. Enterprises should be encouraged to invest in the education and training of their workforce and to build on the functional rather than numerical flexibility of labour.

Adjustment of the enterprise sector to technological and other changes results in an acceleration of flows of workers between jobs, and between employment, unemployment and inactivity. Labour market policy is a device to facilitate a smooth and secure labour market transition of workers. It is a tool that, suitably designed, should promote high levels of employment, reduce frictional unemployment and mitigate long-term structural unemployment or forced inactivity. The aim is to strike the right balance between the adjustment needs of enterprises and the needs of workers, who should feel secure in their jobs or in the transit between jobs and should also be encouraged to constantly improve their skills, flexibility and productivity.

Those who lose their jobs need access to new jobs, with public assistance if necessary. In this process, the public employment service is an institution that requires further strengthening in all the transition economies. Its proper function is to analyse labour market needs accurately and help the unemployed to return to work as soon as possible, through job mediation, vocational counselling, labour market training and other active labour market programmes.

Special attention should be devoted to less competitive social groups, to eliminate discrimination and to assist them to overcome their disadvantages and enter employment. Effective income support in unemployment should mean that job losers and their families do not fall into poverty; it should simultaneously activate their job search, their participation in active labour market programmes (if necessary), and encourage early job take-up, thus contributing to labour mobility. National social security systems must be designed to promote the employment of those who can work, while providing decent income support for those who cannot, either permanently or temporarily. It goes without saying that policies must also be financially sustainable for long-term progress.

DISCUSSANTS' COMMENTS

3.A Gábor Kőrösi[173]

This is a well researched, nicely written paper, which correctly summarizes the important characteristics of labour markets in the transition economies. While I like the balanced approach of the paper, and its coverage, it seems to lack focus. So I will highlight the most important problems.

The paper rightly emphasizes the fact that the major problem is the low employment ratio rather than high unemployment. The current employment ratio in most transition economies is more or less similar to that in developing countries with comparable levels of per capita GDP. However, whereas employment was never substantially higher in those developing countries, in the transition economies, employment is currently well below its former level even in those countries where (registered and/or labour force survey) unemployment appears to be a minor problem. Chart 3.A.1 shows the path of employment loss in three very different countries of the region, compared with the initial year of transition. In some countries employment fell rapidly, in others more slowly, but the loss was substantial in all economies within a decade.

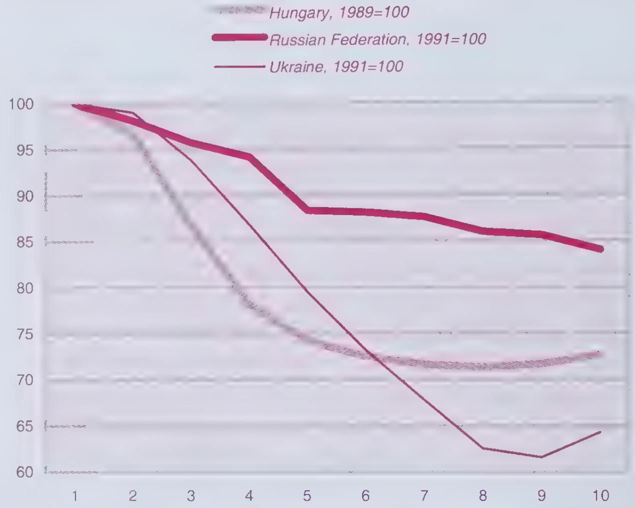
In a typical less developed country, a low employment ratio is usually the consequence of a low rate of female participation in the labour market. Transition economies, however, are different. A large proportion of women used to work during the socialist period. Employment fell for both men and women. Despite the substantial decline in female employment, the female participation ratio is still relatively high in most transition economies. However, this process of job destruction led to an atypically low male labour market participation ratio. This loss of employment is the consequence of a severe structural adjustment process. The two major factors behind this are skill and location mismatches: people have low and/or substantially devalued skills, and they are locked into local labour markets with very meagre employment prospects. Neither of these two factors is gender specific.

As these barriers to employment are long-term, many people have given up searching for a job and are no longer classified as unemployed. For example, the unemployment rate in Hungary has now fallen below 6 per cent. However, this figure disguises a much more serious employment problem. Chart 3.A.2 describes developments in the Hungarian labour market: it shows what would have been the level of economic activity if the 1989 activity ratio had been maintained throughout the period.

The grey area, labelled "'new' inactive" represents those people who used to work, and would like to work again, but are no longer included in the labour force.

CHART 3.A.1

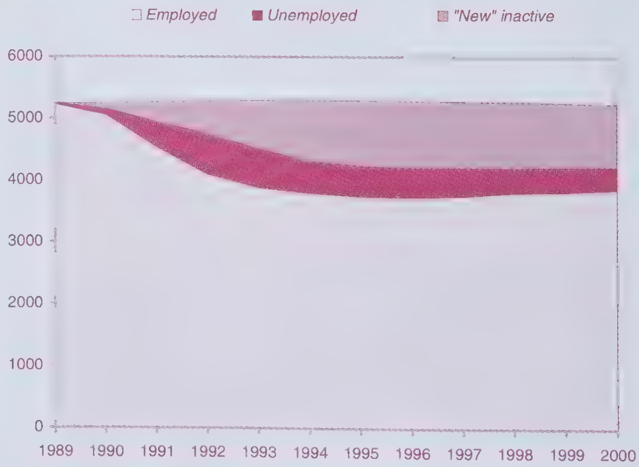
Employment dynamics in the transition process
(Initial transition year=100)



Source: Various national statistical yearbooks.

CHART 3.A.2

The Hungarian labour force, 1989-2000
(Thousand persons)



Source: Central Statistical Office, *Yearbook* (Budapest), various issues; author's calculations.

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[173] I am grateful for the help and comments received from János Köllő.

TABLE 3.A.1

Employment ratios of the population aged 25-62 by level of educational attainment, 1998
(Per cent)

		Men			*Women*		
		All levels	*ISCED 0/1 and 2*	*Difference*	*All levels*	*ISCED 0/1 and 2*	*Difference*
Hungary	33	69.1	37.1	32.0	53.9	31.6	22.3
Poland	24	75.9	57.4	18.5	60.5	40.7	19.9
Comparators							
Austria	28	80.7	65.3	15.4	60.3	45.1	15.2
Finland	28	76.2	61.6	10.9	69.8	57.8	12.0
Czech Republic	16	82.9	57.6	25.3	63.4	41.8	21.6
Comparators							
Denmark	20	84.0	69.0	15.0	73.2	55.7	17.5
Germany	19	76.9	62.5	14.4	59.7	40.4	19.3

Source: OECD, *Education at a Glance* (Paris), 2000, tables A2.1b and E1.1-E1.2.
Note: International Standard Classification of Education (ISCED), UNESCO.

Hungary had a census in 2001. Data processing has not been completed yet, but partial results indicate that most of the people in the grey area declare themselves to be unemployed. Most of them would work if they could, but the prospect of getting a job just seems hopeless to them. Thus the problem is much more serious than the official unemployment figures would lead us to believe.

Take a person who is now aged 40. He has been out of work for the best part of the past decade; he has more than 20 years before he reaches retirement age and so his employment problem will stay with us for a long while. He was 25 in 1987, just a couple of years before the transition started, but when everybody was unaware of its imminence. His education had been completed some years before, and subsequently he was permanently employed. Even if he was not highly skilled, his job was secure as there were shortages in the labour market (except in the former SFR of Yugoslavia).

Throughout the twentieth century, significant shifts in labour demand in the developed market economies have favoured people who were more skilled and better educated.[174] But this was not the case for late socialism: there was very little structural change, and technical progress was very slow in the 1970s and 1980s. Thus, our worker grew up in a stagnant society, where little changed. Educational opportunities were artificially constrained, and because the wage premium paid for the additional education was small, there was little incentive to study beyond the basic level. He was trained exactly for the skills needed for his job and so he was unprepared for any substantial change. His skills were limited to the particular needs of a particular economy and he worked with outdated technology in a poorly organized work environment. That was the norm. Continuing education was untypical; it was assumed that he would continue to do more or less the same work until retirement. And, of course, he was business illiterate. Even well educated people tended to be unaware of the normal working of a modern market economy, and the skills required to cope with it.

Our worker's skills, however, are inadequate in the rapidly emerging market economy, and low-skilled people have significantly worse employment chances. Table 3.A.1 compares the employment probabilities of poorly educated people with the average in the three most successful transition economies, and in some traditional market economies of similar size. It is clear that poorly skilled people are much worse off in the transition economies, as their skills have been substantially depreciated during the transition period, although the situation is somewhat better in the Czech Republic.

One reason for these differences is that, except in the Czech Republic, education in socialist economies did not provide the same skills as in the developed market economies. While some schools and universities excelled in mathematics and science, the median school leaver was not properly equipped even with basic literacy skills. Chart 3.A.3 compares literacy skills in four transition economies with the OECD average (International Adult Literacy Survey (IALS)), on the one hand, and to those in Chile on the other. The transition countries (except the Czech Republic) are more similar to Chile than to the developed OECD countries.

Thus, the relatively high level of education in the socialist system does not necessarily represent a high-skill level in a market economy. The median skills obtained in the socialist educational system were mediocre at best – dated, frequently obsolete and incomplete – thus, they were seriously devalued on the new labour market and not in demand by firms employing modern technologies. Skill-biased technical progress has suddenly arrived in the transition economies. And those who have been unable to work for years lose a substantial part of their former technical and social skills.

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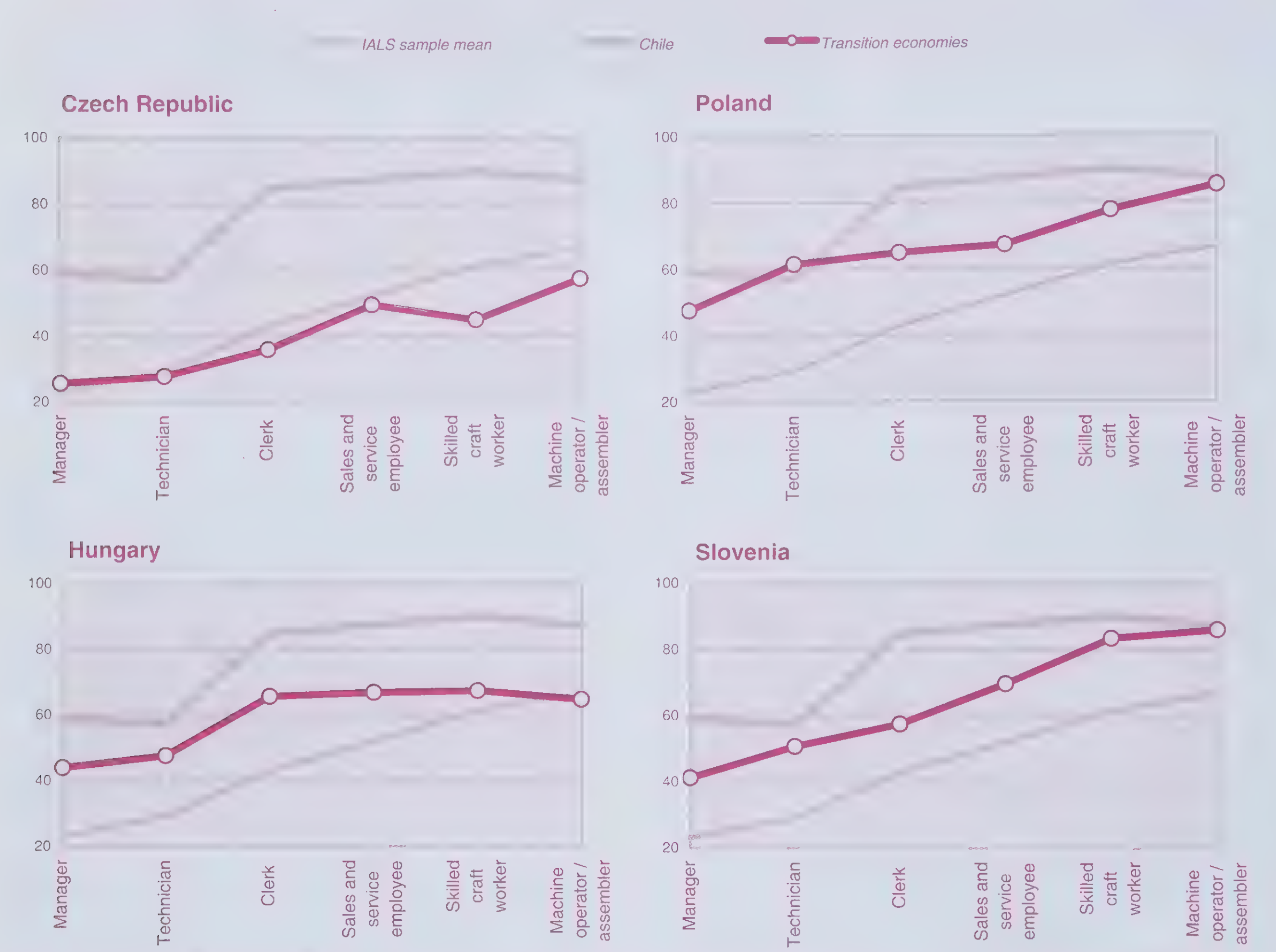
[174] C. Goldin and L. Katz, *The Returns to Skill in the United States across the Twentieth Century*, NBER Working Paper, No. 7126 (Cambridge, MA), May 1999.

CHART 3.A.3

Percentage share of workers with poor literacy skills (levels 1 and 2), by occupation



Source: Statistics Canada, *Literacy in the Information Age*, 2000, annex D, pp. 196-171.

Most transition economies have seen an explosion of tertiary education, partly because former administrative constraints were removed or weakened, and partly because of the better job prospects for graduates and the increased returns to higher education. However, this expansion is usually severely underfinanced, as it has occurred at just the moment when the economies were in deep recession. There is therefore a risk that this situation may lead to a further deterioration of the rather low-skill level of graduates of higher education, creating an inflation of formal educational attainment without much substance.

The employment problem also has regional characteristics. All transition economies have their rustbelts of former industrial and mining centres. However, that is only one part of the problem, and probably not even the least tractable one. As multinational companies invest intensively in these economies, they also bring some employment to these regions if they find the proper business infrastructure and are given some incentives.

The biggest problem in all these economies, however, is rural employment. As socialist economies were characterized by shortages,[175] firms were eager to attract low-skilled employees from the villages. They either established workshops in the villages employing 20-50 people, or paid for the extra cost of employing them elsewhere. These workers either commuted relatively long distances daily at the expense of the company, or were housed in workers' hostels. However, the cost of their employment was high. Most of the small village workshops were closed down at the onset of liberalization. Downsizing at the centre also hit these people first. As their only asset was usually their house (and perhaps a small plot of land) in their native village, they returned there, many to subsistence farming or to inactivity. They cannot afford to commute to nearby cities, because of the prohibitively high cost.[176] Renting a

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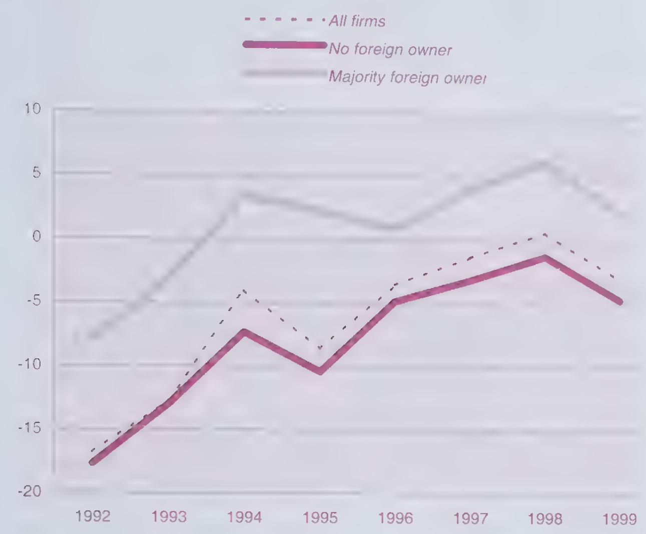
[175] J. Kornai, *Economics of Shortage* (Amsterdam, North Holland, 1980).

[176] In Hungary, the cost of daily travel to a workplace 25 kilometers away was equivalent to the minimum wage in 1998, either by public

CHART 3.A.4

Employment changes by type of firm ownership in Hungary, 1992-1999

(Percentage change)



Source: G. Kõrösi, *Labour Adjustment and Efficiency in Hungary,* Institute of Economics Working Paper, BWP 2002/4 (Budapest), June 2002.

flat in a city is similarly impossible at current rents and earnings. School leavers frequently migrate to prosperous towns, but older people cannot sell their house, because the money they would get for it is less than the cost of a house in prosperous areas. These inactive people are stuck in the poor villages or small towns. Migration is at historic lows in many transition countries.[177] Thus, their only hope is for local employment, but that is not forthcoming.

A major ingredient of successful transition is foreign direct investment. Most job creation has occurred in the local subsidiaries of multinational companies in those economies where restructuring has progressed rapidly. Chart 3.A.4 shows employment growth in incorporated firms by ownership type in Hungary, corrected for composition effects. However, there are clear limits to this sort of job creation. As multinationals in manufacturing sectors frequently use capital-intensive, highly-productive technologies, their labour demand is limited. They will usually only employ well skilled, preferably young people.[178] Foreign direct investment brings economic growth and some jobs, if the conditions are right, but only to the easily accessible centres with reasonable infrastructure. Massive foreign investment may help to revitalise former industrial centres, hard-hit by transitional recession. It is unlikely, however, that multinational companies will bring jobs to destitute small towns and villages. Rural job creation is left to the domestic entrepreneurs, but they are rather less successful in doing so.

The number of small enterprises in the transition economies has mushroomed, but most of them are basically family businesses for self-employment. The owner – farmer, shopkeeper, restaurateur, etc. – may have some employees, but they maximize revenue (consumption) rather than profit. They are unlikely to expand and create many new jobs.

Despite the celebrated initial success stories in all transition economies, there are very few domestic profit-maximizing entrepreneurs. Many de novo private companies, created during the initial phase of transition, exploited local monopolies, and they were usually ill-equipped to face tough competition on the emerging liberalized market economy. Many disappeared, or were sold to foreign investors. People educated in the socialist system were (and all too frequently remained) business illiterate: they have no knowledge of marketing, they are unable to do basic cost benefit analysis or fill out a loan application without help, not to mention the conclusion of more complicated contracts with would-be corporate partners, etc. These skills are necessary to survive in a fiercely competitive market. Some young people are learning them at universities and at newly created business schools, but few will go to the villages to start an enterprise. However, a small village enterprise, employing 10-50 people, does not necessarily need the full range of skills taught at an MBA course.

Until the transition economies find a solution to rural employment, low levels of employment will persist, creating the risk of instability in these societies. It may also complicate the process of EU accession, as many will have to continue subsistence farming, thus boosting the number of farmers, which causes the Union so much concern. But governments are not well placed to handle this problem: the sort of education that would facilitate successful enterprise is better done by private firms. However, governments should set up the basic infrastructure for this sort of development through regional development agencies to facilitate rural job creation. Although firms created with the assistance of development agencies should, of course, have to compete on the local markets as any other firm, the initial job creation effort will need some public financing.

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transport or by just paying for the fuel of a standard passenger car. J. Kollo, *Patterns of Non-Employment in Hungary's Least Developed Regions,* SOCO Project Paper No. 77a, IWM (Vienna), 2000.

[177] J. Fidrmuc, *Migration and Adjustments to Shocks in Transition Economies*; Bonn University, Centre for European Integration Studies, ZEI Working Paper, June 2001

[178] Foreign firms in Hungary reported severe shortages of skilled workers from late 2000, despite the low level of employment. They were not very successful in recruiting migrants from the poor regions ridden with high unemployment rates, despite the fact that they were offering relatively high wages.

3.B Iskra Beleva

Employment and unemployment problems are indisputably among some of the most crucial problems of economic and social development facing transition economies. There is no need to provide additional evidence to support this statement, since the paper under discussion does precisely that with comprehensive facts and detailed analysis. Here I would like to comment on the most crucial messages, which the paper outlines, as well as the options for improving current policies with regard to increasing employment and reducing high levels of unemployment.

The first important message is that the replacement of inherited hidden overemployment with open underemployment continues to maintain a low level of utilization of labour resources.

Compared with the so-called "full employment" under the communist regime, the transitional economies today are experiencing a period of extremely high non-utilization of their labour resources. This fact is expressed in low and declining participation rates, a low employment rate and high unemployment rates, as well as an increased number of so-called "discouraged" workers. The non-utilization of labour is a subject of discussion not only in this paper, but also in many other studies and there is no controversy among academics and governments as to its importance. Discussions are focused on the causes of the problem and the extent to which policies to deal with it have been successful. The present paper opens up many avenues for discussion as it provides an in-depth analysis of the reasons for low levels of employment and high and persistent rates of unemployment.

The second important message is that macroeconomic stabilization is not a sufficient condition for reducing unemployment.

I fully support the author's thesis that macroeconomic stabilization is a necessary but not sufficient condition for increasing employment and reducing unemployment. Of the 25 countries studied only five had negative rates of economic growth in the period 1994-2000. In the same period employment fell in 17 countries, and in eight countries it only showed insignificant growth. For some of these countries, the increase in employment can be related to the delay in the restructuring processes rather than to progress in the reforms. The fact that employment continued to stagnate even after five years of economic growth indicates that the unemployment is the result of a combination of factors of different origin and intensity. Maintaining macroeconomic stabilization with monetary and fiscal policies leads to labour market stagnation, if they are not supported by a dynamic restructuring policy and a favourable business environment.

The third message is that privatization and restructuring of the economy are important for creating jobs and restructuring employment. However, their effects will differ in intensity depending on how they complement other components of reform.

This aspect of the reforms obviously has a significant impact on the dynamics of employment and unemployment. The paper does not give a definite answer as to whether rapid or slow privatization is preferable for stimulating job creation and reducing unemployment. By reviewing the various practices regarding the pace and methods of privatization, the author outlines a number of negative consequences from the adoption of one or another privatization model. It is evident that in all cases specific problems arise from the inherited state structures, the country's attractiveness to foreign investors, the current business environment and the strength of domestic investment, and the activities of the state in supporting large-scale infrastructure and social projects.

If the structure of the newly established firms is reviewed this would reveal the positive effect of foreign direct investment on the creation of new jobs and increasing employment. The countries which have managed to attract significant amounts of such investment are examples of this positive influence.

The small and medium-size enterprises have an influence on the level and structure of employment. This sector is identified as an important generator of new jobs and it shows a capacity for flexibility and adaptability to market conditions. However it provides more limited conditions for sustaining employment, investing in human capital and maintaining the quality of future labour. Unfortunately the paper does not provide figures for the development of this sector in terms of its share in total employment and manufactured output. I will only point out that a Bulgarian survey for the period 1997-2000 indicates a high rate of firm turnover (21.2 to 21.8 per cent), which places a heavy burden on the labour force.[179] The difficulty of gaining access to credit is one of the major problems for small and medium-sized enterprises. This problem is mentioned in the present paper but it requires further development and precision, and policy proposals for more effective schemes to alleviate the problem of obtaining credit, including the establishment of special funds to support the development of this type of enterprise.

Alena Nesporova's paper draws attention to the share of self-employment in total employment as a basis for making conclusions about the development of small and medium-sized businesses. The promotion of self-employment is an important element in an active labour market policy. However this type of employment is only an element in the development of the small and medium sector. Such employment is extremely unstable, and much of it operates on the boundary of the legal and illegal economies. Its development depends to a great extent on the situation of the economy and the overall labour market and this is explicitly underlined in the paper, where it is said that there is a "strong correlation between the share of self-employed workers, the country's economic performance and its labour market situation …".

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[179] J. Rutkowski, "Why is unemployment so high in Bulgaria?", ECSHD (paper presented at a World Bank seminar as: "An update on poverty in Bulgaria: a background paper for the Bulgarian Poverty Assessment" (Sophia), May 2002).

The fourth important message concerns the significance of the informal sector and the high tax burden on labour.

Alena Nesporova does not review separately the tax arrangements under which small and medium-sized businesses operate. However these are an integral part of the business environment and can influence employment for better or worse. High tax rates reduce the propensity to create jobs in the formal sector and stimulate hidden employment, a problem that is apparent in almost all transition economies. The quoted data for Poland, of about 5 per cent of employment in the informal sector, is insignificant in the light of the data for other countries reported by the World Bank: 53.2 per cent in Georgia, 50.7 per cent in Azerbaijan, 41 per cent in Russia, almost the same in Bulgaria and Lithuania, and about one third in countries such as Estonia, which is advancing rapidly with reforms. Due to the lack of sufficiently precise data for other countries, I will just point out that the high tax burden on labour (about 43 per cent of total wage costs) is one of the reasons for the high level of informal employment in Bulgaria. The contribution rate for the employers is about 34 per cent of the wage bill, of which 26.2 per cent is social security, 4.8 per cent the health tax and 3.2 per cent the contribution to the unemployment fund. Employees paid 8.5 per cent, of which 6.5 per cent is social security, 1.2 per cent the health tax and 0.8 per cent the contribution to the unemployment fund. In order to avoid this tax burden, employers often hide the actual level of wages by insuring their employees only on the minimum wage. This is the case for 68 per cent of small firms (with up to 50 employees) and for 17 per cent of firms with over 500 employees.

The fifth message refers to the contribution of supply-side factors to the high level of unemployment.

There are two important supply-side issues which influence unemployment, namely, the quality of the labour force and the effects of education, which are worth discussing in order to develop more adequate policy measures.

More than 10 years of transition have led to a number of changes in the educational structures of the transitional countries. Thus, the widely repeated statement that the transition countries have the advantage of a cheap and well-educated work force should be revised in this context. Unfortunately, the data in the paper do not give a picture of changes in educational levels, only a snapshot of the situation in 2001. However, there are a number of indicators that show a deterioration: these include the number of children leaving school at different educational levels, particularly in the primary educational stages and the expansion of illiteracy. These are phenomena that could have a significant influence on the quality of the labour force in the medium and long term.

It is also necessary to point out that the educational system fails to correspond to the practical needs of the economy and is unable to react adequately to changes in the structure of the labour force. The existence of significant imbalances between the actual qualities of the labour force and those in demand by enterprises indicates the presence of structural unemployment, which particularly affects the younger members of the labour force.

The sixth message concerns active labour market policies.

The paper points out that financing is one of the major problems of labour market policy, and one which remains unresolved. The question of the effectiveness of these programmes, however, is very disputable considering that some of these policies subsidize employment of relatively low quality. Others promote self-employment but often such employment is short-lived after the end of the programme. Nevertheless the mobilizing effect of participating in these active labour market programmes should not be ignored as a means of reducing economic and social isolation and demotivation.

The final message concerns the significant increase in poverty caused by high levels of unemployment and poor employment prospects.

This aspect of the economic and social development of the transition economies has not been discussed in the paper, but it should be emphasized. Poverty breeds poverty and limits the transition countries' opportunities for prosperity. Once caught in a poverty trap, these countries will have to invest much more to overcome the impoverishment that results from isolation from employment and limited opportunities. A World Bank survey provides some data which indicate that poverty affected 6.4 per cent of the population in Bulgaria in 2001, 6.6 per cent in Latvia in 1998, 6.8 per cent in Romania in 1998, 3 per cent in Ukraine in 1999 and 2.1 per cent in Estonia in 1998, defining the poverty threshold as $2.15 per day. The figures are four to five times higher if a poverty threshold of $4.2 per day is used, which would imply the share of the population living in poverty varies between 30 and 44 per cent in the studied countries.[180] According to the same survey, 40 per cent of unemployed people in Bulgaria were classified as poor in 2001, which minimizes not only their own chances for reintegration in the labour market, but also the opportunities for their children.

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[180] G. Carletto and T. Fujiiq, *Bulgarian Poverty Assessment,* World Bank (Washington, D.C.), March 2002.

In conclusion.

The analysis of the reasons for low employment and high unemployment in the transition economies outlines some major conclusions but at the same time stresses that no uniform solution exists. A combination of factors act with different degrees of intensity in the various countries and with different effects on employment and unemployment rates.

Nevertheless, it will not be possible to achieve progress if the issues of employment and unemployment are not put in the centre of government policy. This paper, along with a number of previous studies on this issue, emphasizes the need for synchronized and mutually consistent economic and social policies. There are a number of indications that inconsistent and "one-sided economic reforms" have produced and maintained a number of imbalances in the labour markets, which in turn have led to various negative economic and social consequences resulting in an increasing incidence of poverty. Thus reform programmes need to be structured so as to achieve not only better rates of economic growth but also to promote employment and reduce unemployment to rates which will not lead to a chronic deterioration in the quality of the labour resources of the transition economies.

CHAPTER 4

INCREASING THE SIZE OF THE EUROPEAN LABOUR FORCE: THE RELEVANT TRADE-OFFS

Tito Boeri

4.1 Introduction

In March 2000, the European Summit in Lisbon subscribed to the very ambitious goal of raising the employment rate by almost 10 percentage points in less than 10 years. More precisely, the task set out in Lisbon was to increase the employment to working-age population ratio from 62.4 per cent in 1999 to 70 per cent by the year 2010, attaining at least 60 per cent in the case of women. These targets reduce the gaps between the EU and the employment-to-population ratios prevailing in the United States (respectively, 74 and 68 per cent). The economic rationale behind targets defined in terms of employment rather than unemployment rates resides mainly in the opportunity offered by a broader employment to reduce tax rates on labour without necessarily reducing the scope of redistributive policies.

Closing the gap in employment rates between the EU and the United States would also, at least in principle, allow a closing of the gap in GDP per capita between the two sides of the Atlantic as labour productivity in Europe has significantly converged towards the United States level. However, this income convergence scenario (in Lisbon the EU Heads of State promised that, by 2010, the EU would be "the most dynamic Continent of the World") will materialize only if the EU succeeds in dramatically increasing employment rates without reductions in labour productivity. The experience of the United States over the 1990s suggests that it is possible to combine strong employment growth with productivity enhancements, but the task is dauntingly difficult, particularly in Europe.

In order to achieve the Lisbon targets, many EU countries will not only have to absorb long-term unemployment, but also to increase participation rates and reduce the size of the informal sector. Jobs involving individuals who have been on the dole for a long time and persons with a weak attachment to the labour force typically attain relatively low-productivity levels. The informal sector is itself mainly composed of low-productivity jobs surviving just because employers (often in agreement with their employees) do not pay taxes and social security contributions and/or do not apply contractual or minimum wages. Thus, creating these types of jobs is likely to *reduce* average labour productivity in the EU area because of compositional effects.

Moreover, the creation of more low-productivity jobs will challenge the labour market and social policy institutions prevailing in many EU countries. In particular, it will require some sort of relaxation of institutions, which are compressing the structure of wages from below as low-productivity jobs can only survive by paying lower wages. Faster employment growth has indeed occurred in the last decade mainly in the countries with less compressed earnings structures.

Convergence towards the Lisbon targets can be achieved without significant reductions in labour productivity and, above all, without having to phase out the redistributive institutions, which characterize the European landscape. This requires the introduction of in-work benefits and activation measures, along the lines of the Scandinavian and British welfare-to-work experience.

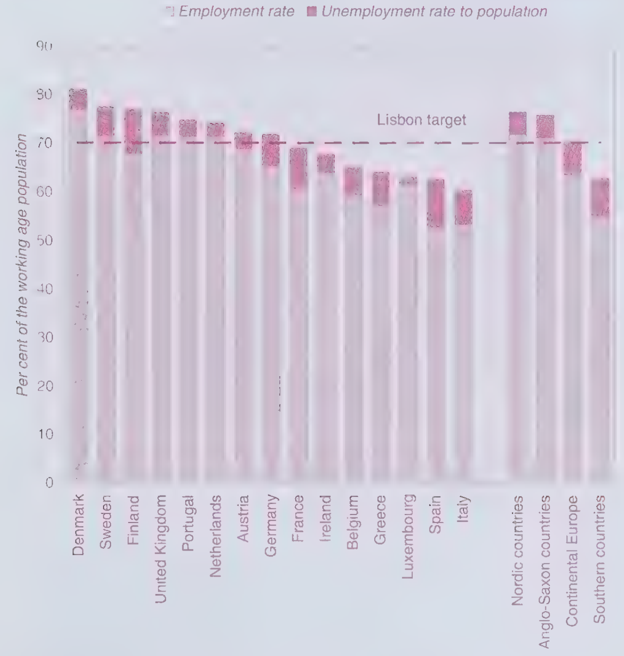
The purpose of this paper is to provide an overview of the main tools to be activated if this strategy is to be pursued. Thus, we will first address feasibility constraints and then dwell on specific policy proposals. In particular, section 4.1 characterizes the trade-offs, section 4.2 moves on to discuss welfare-to-work policies and section 4.3 concludes by discussing the role of other complementary policies, such as migration and reforms of European pension systems.

4.2 The trade-offs

There is currently a large variation in employment rates across the European Union (chart 4.2.1). They range from 76.5 per cent in Denmark and levels exceeding 70 per cent in Sweden, the United Kingdom and the Netherlands, to lows of 52 to 56 per cent in Italy, Spain and Greece. The Mediterranean countries of the EU face the greatest challenge in making progress towards the Lisbon targets. In order to reach these, the southern countries will have to increase their employment to population ratios by about 2 percentage points per

CHART 4.2.1

Employment and unemployment in the European Union: "How far from Lisbon?"
(Per cent of working-age population)



Source: Eurostat, Labour Force Survey, 2001.

year. More importantly, in many EU countries (Belgium, France, Greece, Ireland, Italy, Luxembourg and Spain), convergence to the "Lisbon scenario" will require increasing labour force participation rather than simply absorbing unemployment. The "de-commodification" resulting from social policies,[181] that is, the freeing of individuals from the need to toil and work in order to survive, will have to be reconsidered, notably in the southern countries, if the targets agreed upon in Lisbon are to be achieved.

Another factor statistically reducing employment rates in southern Europe is the presence of a large informal sector. There is not much deep economic thinking on this phenomenon. The puzzle to be investigated is why the "shadow sector" has increased quite dramatically in many countries[182] in spite of improvements in tax collection technologies, which make it easier to detect and repress irregular employment. One explanation is that the informal sector is mainly composed of low-productivity jobs, which are viable only if employers and workers evade labour taxes or operate below the contractual minima. Under these circumstances, repressing the informal sector may backfire in terms of a higher incidence of unemployment.[183]

More broadly, the low employment rates prevailing in many European countries are the by-product of the exclusion from the world of work of youngsters and women, since the employment rate for the core group of middle-aged men is more or less the same across the EU (and not much different from that of the United States). Even if this was not explicitly stated in Lisbon, the attainment of the target is likely to involve a further expansion of part-time and temporary jobs, as well as more low-wage/low-productivity jobs. These are the jobs which have been the most frequently created in recent years[184] (chart 4.2.2) in the countries that are the furthest away from Lisbon. Part-time jobs are, in any event, needed to accommodate higher participation in the labour market of women and young people.

Redistribution hinders job creation. Stronger employment growth has occurred in the 1990s in the countries allowing for more dispersed earning structures (chart 4.2.3). Competitive pressures associated with "globalization" and the process of European integration, notably the price transparency induced by the circulation of Euronotes, are bound to increase further the employment bias of institutions compressing wage structures.[185]

Under these circumstances, attaining the Lisbon target is likely to require reforms of labour markets and changes in bargaining institutions or unions' strategies in many EU countries, allowing for more flexible working-time arrangements and more wage dispersion, as well as adjustments of social welfare systems in the direction of increasing the rewards from labour market participation for individuals with potentially low-productivity levels.

The problem is that the institutions to be reformed play a useful role. Broadly speaking, they trade-off lower productive efficiency against *ex ante* distributional equity. This is desirable, from an *ex ante* point of view, in the presence of market failures, e.g. the absence of private insurance against the risk of becoming or remaining unemployed, because moral hazard and adverse selection[186] stand in the way of such potential

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[181] G. Esping-Andersen, *Social Foundations of Post-industrial Economics* (Oxford, Oxford University Press, 1999).

[182] F. Schneider and D. Enste, "Shadow economies: size, causes and consequences", *Journal of Economic Literature*, Vol. 38, No. 1, March 2000, pp. 77-114.

[183] T. Boeri and P. Garibaldi, *Shadow Activity and Unemployment in a Depressed Labour Market*, CEPR Discussion Paper, No. 3433 (London), June 2002.

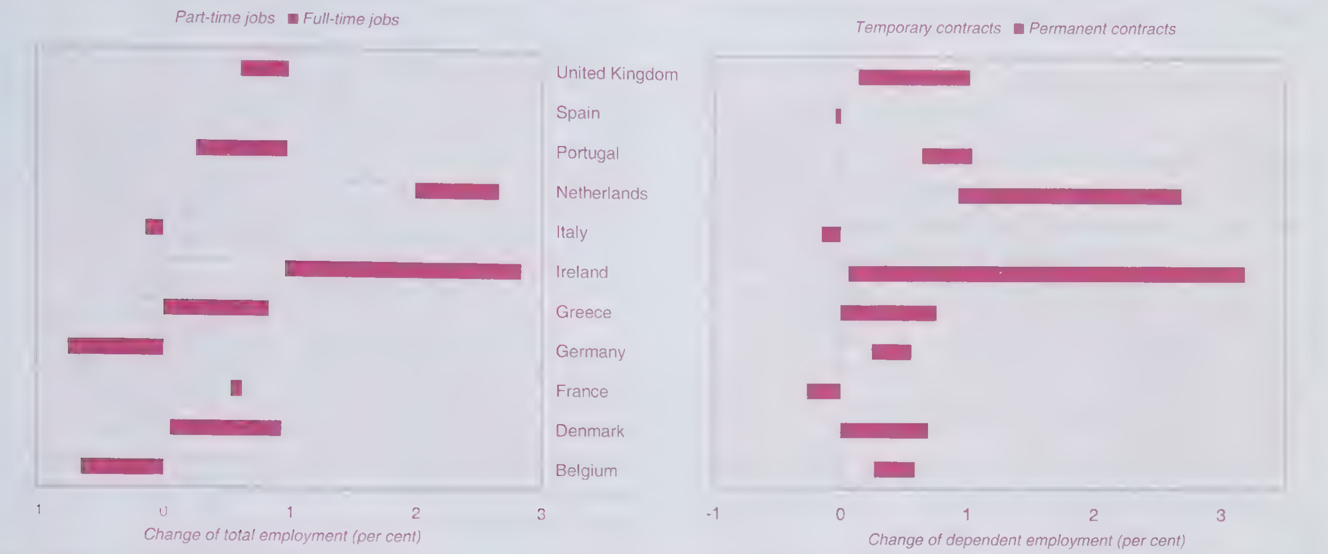
[184] P. Garibaldi and P. Mauro, "Anatomy of employment growth", *Economic Policy*, Vol. 17, Issue 34, April 2002, pp. 67-113.

[185] G. Bertola and T. Boeri, "EMU labour markets two years on: microeconomic tensions and institutional evolution", in M. Buti and A. Sapir (eds.), *EMU and Economic Policy in Europe: The Challenge of the Early Years* (Aldershot, Edward Elgar, 2002).

[186] Workers would not try as hard to avoid unemployment and find new jobs if they were covered against the negative consequences of the event. And workers who know their unemployment risk is particularly high would make the scheme unprofitable for insurance providers and/or unattractive to workers with average risk.

CHART 4.2.2

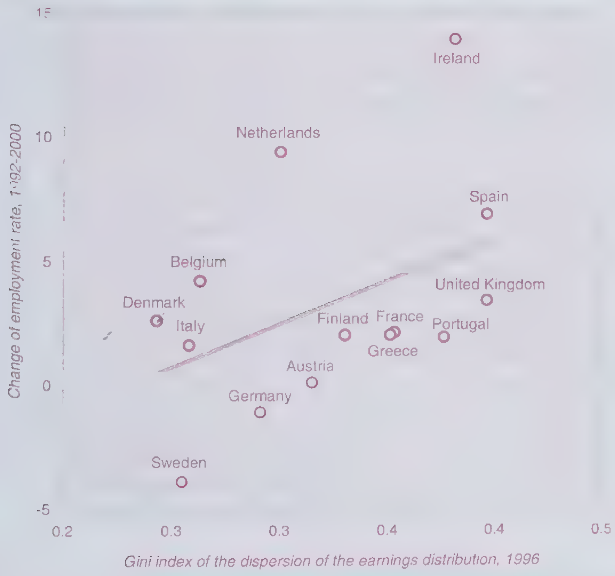
Contribution to the creation of part-time and temporary jobs, 1983-2000
(Percentage changes)



Source: Eurostat, Labour Force Surveys, 1983-2000.

CHART 4.2.3

Employment growth and earnings inequality in the European Union, 1992-2000



Source: European Community Households Panel (ECHP) Wave 4.

contractual arrangements. However, the provision of insurance in the presence of asymmetric information unavoidably decreases productive efficiency, since workers have no less incentive to seek protection from "unfair" developments and this decreases the labour market's speed of adjustment.

Limits to competition for jobs, e.g. in terms of minimum wages and contractual agreements preventing wage underbidding, also fulfil a useful purpose from the point of view of at least some economic agents. Otherwise, it would hardly be possible to see why they were introduced in the first place or to understand why it is so difficult to reform them in the face of major structural change. The combination of wage and quantity (employment protection) rigidities is indeed successful if its aim is the protection of some workers from negative labour market developments: not only are wages compressed and stable, but the tenure of "regular" workers is also longer in more rigid labour markets. It would be quite misleading, especially in Europe, to suppose that all labour market reforms should aim at achieving productive efficiency at the expense of distributional objectives.

Thus, it is important to pursue reform trajectories that reconcile redistribution and employment growth, such as those discussed in the next section.

4.3 Strategies reconciling redistribution and employment growth

There are ways to partly reconcile equity and efficiency. Two strategies being applied increasingly in Europe are:

- Activation strategies, which enforce work tests and apply sanctions (such as benefit reductions) on those who do not actively seek employment;
- Financial incentives to work at relatively low wages.

Financial incentives, unlike activation strategies, not only reduce the disincentives to participation of low-skilled individuals, but also reduce the potentially large windfall effects on workers. The pros and cons of activation measures and financial incentives are reviewed below.

(i) Activation strategies

Experimental evidence on the effects of activation strategies of public employment services (PES) is limited mostly to the United States. Some, non-experimental evidence, is available for European countries.[187] While there are still some grey areas, important lessons (including negative ones as to policies that do not work) can be drawn from this literature.[188] Let us review these lessons by main policy instrument.

(a) Job search assistance and tests

After the disappointing experience of the 1980s, many Anglo-Saxon countries have moved increasingly towards a "shortest route to re-employment" approach that, rather than placing the unemployed on hold in large-scale training or work experience programmes, tries to reintegrate them into a job as quickly as possible.[189] This strategy relies heavily on job search assistance and tests. Experimental evidence supports the role of job search assistance and tests for women and for those who have not been receiving benefits over a long period. In particular, the Canadian Self-Sufficiency Project and the Minnesota Family Investment Project in the United States (both targeted at welfare recipients) were designed specifically to test the *incremental* effect of policies aimed at an early reintegration into employment, primarily job search assistance, then short-term training and job counselling, over and above the effects of financial incentives. Other experiments conducted in cooperation between several United States states and employment services have shown considerable cost savings from job search requirements.[190] Thus, in Switzerland, the United Kingdom and the United States individuals must now achieve a minimum frequency (usually determined by the PES based on each individual case) of job applications.

(b) Job counselling

Experimental evidence from Maryland confirms significant effects of job counselling on outflows from unemployment to jobs.[191] Significantly, most of the increase in exits from unemployment occurred just before a compulsory four-day job search training workshop, which increased the opportunity costs of drawing unemployment benefits. The workshop attendance itself did not exert significant effects on outflow rates. In other words, it is the "help and hassle" approach followed in that case that stimulated exits from unemployment, rather than the job search training scheme per se.

(c) "Suitable job" tests and sanctions

Insufficient action to prevent the loss of a job and refusal to take up a "suitable"[192] job or to be involved in training schemes can be sanctioned with a reduction in benefit. These sanctions (ranging between 5 and 35 per cent of the benefit due) have proved rather effective in raising transition rates to employment in the Netherlands and Switzerland.[193]

Activation policies have been more successful for some groups of beneficiaries than for others.[194] In particular, policies to encourage women to return to the labour market have empirically been the most successful. For this group, job search assistance, counselling and training directed at the immediate return to work have been found successful in several experimental evaluations. Much more difficult is the case of unemployed youths with limited or no labour market experience. There is increasing evidence that training per se has very little effect on this group and that constant monitoring and testing of their activity is crucial.[195] The

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[187] K. Walsh, J. Atkinson and J. Barry, *The New Deal Gateway: A Labour Market Assessment*, Institute for Employment Studies, Employment Service Research Report, No. 24, May 1999; T. Boeri, R. Layard and S. Nickell, *Welfare-to-Work and the Fight Against Long-term Unemployment*, Department for Education and Employment, Research Report, No. 206 (London), March 2000.

[188] These are discussed in greater detail in T. Boeri and R. Perotti, *Meno Pensioni, più Welfare* (Bologna, Il Mulino, 2002), forthcoming.

[189] This is perhaps best exemplified by the Alberta overhaul of its unemployment benefit system, and by the introduction in 1996 in the United Kingdom of the Job Seeker's Allowance that emphasizes job search assistance over training or work experience programmes. T. Boeri, R. Layard and S. Nickell, op. cit.

[190] D. Grubb, "Eligibility criteria for unemployment benefits", *OECD Economic Studies*, Vol. 2000, No. 31, Issue 2 (Paris), 2000, pp. 147-184.

[191] J. Benus, J. Joesch, T. Johnson and D. Klepinger, *Evaluation of the Maryland Unemployment Work Search Demonstration: Final Report*, Maryland Department of Labor, Licensing and Regulation Office of Unemployment Insurance (Baltimore, MD), November 1997.

[192] Among the most relevant issues to be addressed by the definition of a "suitable" job offer is the amount of travel time required to get to the workplace. In the Netherlands and the United Kingdom, no more than two hours travel daily are contemplated. In Belgium and Switzerland, the upper limit is four hours, although it is rarely enforced. Occupational protection (allowing unemployed people to refuse job offers involving a change in occupation) is typically provided only at the beginning of an unemployment spell. OECD, *Employment Outlook* (Paris), June 2000.

[193] J. Abbring, G. Van den Berg and J. van Ours, *The Effect of Unemployment Insurance Sanctions on the Transition Rate from Unemployment to Employment* (Rotterdam, Tinbergen Institute, 1999); M. Engelen, S. Bunt and L. Samson, *Activating Instruments in the Social Assistance Law: Interim Report* (The Hague, SZW, 1999); R. Lalive, J. van Ours and J. Zweimüller, *The Effect of Benefit Sanctions on the Duration of Unemployment*, Institute for Empirical Research in Economics, IEW Working Papers, No. 110 (Zurich), March 2002.

[194] J. Martin, "What works among active labour market policies: evidence from OECD countries' experiences", *OECD Economic Studies*, Vol. 2000, No. 30, Issue 1 (Paris), 2000.

[195] According to surveys of young unemployed people in Britain, many job seekers feel that unemployment benefits are an entitlement with few obligations. Thus, if a person's benefit is £200 and he is offered a job paying £240, he will often say "I will be working for £40". J. Atkinson and N. Meager, *Evaluation of Workstart Pilots*, Institute for Employment Studies, Report No. 279 (Brighton), November 1994.

British New Deal is perhaps the most articulated effort to deal with this problem to date.[196] Key features of the New Deal are: (i) the combination of lump-sum wage employment subsidies with job search assistance and on-the-job training; (ii) an initial four months Gateway period, to screen out individuals who are more easily unemployed and minimize deadweight costs; and (iii) a separation of young unemployed into two types, according to age and the duration of their unemployment spell. To date, there is virtually no empirical evidence on the New Deal, except for some – encouraging – evidence on outflows from unemployment in the Gateway period: it has been estimated[197] that the New Deal is responsible for an increase in the probability of exiting unemployment by about 20 per cent, of which one fifth can be attributed to the stricter job search requirements.

As suggested by the above, activation policies require an effective public employment service, separate from but communicating with the administration of social assistance benefits, and an effective and rapid system of sanctions. The whole approach of activation policies is based on a "help and hassle" or "back to work" approach that cannot work without a clear legal framework and effective sanctions. The responsibilities and prerogatives of the various agencies should be clearly identified; in particular, the PES should be able to sanction violations of the "suitable work" criteria and "job search" requirements quickly and terminally, without endless administrative litigation. A recent survey of eligibility requirements for unemployment benefits concluded that "the surveillance of independent job search can be the most important intervention by the PES to activate the unemployed".[198] International experience supports these conclusions. A study by Ernst and Young Consulting commissioned by the Swiss government found that in some Regional Placement Offices "the implementation of a sanction takes several months, and recommended that employment counsellors should be able to implement sanctions independently and immediately, without any need for prior authorization by another part of the organization".[199] It has also been observed that "all [four European countries that have had some labour market success] resorted to a much stricter enforcement of job search and suitable work provisions".[200] Recently, a report by the National Audit Office of Sweden concluded that "institutional arrangements are a fundamental obstacle to the development of effective control mechanisms for unemployment insurance and leave room for wide fluctuations in the interpretation and application of suitable work criteria, and that the application of suitable work criteria should be overhauled as an urgent matter of national significance".[201]

(ii) Financial incentives

There are two possible types of financial incentive to employment: an employment conditional incentive (ECI) and a wage subsidy. The former is a subsidy to labour supply, the latter to labour demand.

The employment conditional incentive complements the earnings of individuals who work at relatively low wages. As such, an ECI, unlike the minimum guaranteed income (MGI) scheme, encourages participation in the labour market. By adopting appropriate design features – e.g. by restricting access to some classes of individual (such as long-term welfare recipients or unemployed) or by imposing a full-time work requirement – it is also possible to reduce the windfall problem whereby individuals who are already working opt-in the ECI ("windfall beneficiaries"). It is also possible to deal with incentives to reduce the working hours of individuals who, at the existing rate of earnings do not qualify for the ECI, but who may decide to substitute leisure for work in order to get access to it ("opt-in beneficiaries").

Employment conditional benefits typically involve a phase-in region, a constant region and a phase-out region as depicted in chart 4.3.1. They can be provided either as a tax credit or as a benefit. In the former case, they do not involve an increase in expenditure (which is particularly appealing for countries with large public debts), but work only if refunds are quick (which is frequently not the case) and do not reach those individuals who do not complete a tax form. Eligibility can be assessed on individual or family incomes. In the latter case, it can be better targeted to those actually in need of income support, but this may have adverse effects on the participation decisions of secondary earners in the household.

An ECI works better when the wage distribution at the low end is sufficiently dispersed, and when taxes on labour income are relatively low. With enough dispersion at the low end, the "phase-out" region – and its associated disincentive to hours and upskilling (e.g. via investment in training) – involves a relatively small share of the workforce. The programme is also less costly in this case. In addition, the wage at the low end of the distribution is relatively low, hence a small increase in taxes at the high end can imply a large relative increase in benefits at the low end and therefore strong incentives. When taxes are low, the distortions generated by higher (implicit) taxes in the phase-out region and (explicit) taxes in the financing region (those not affected by ECI) are also lower.

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[196] T. Boeri, R. Layard and S. Nickell, op. cit.

[197] R. Blundell, M. Costa Dias, C. Meghir and J. Van Reenen, *Evaluating the Employment Impact of a Mandatory Job Search Assistance Program*, The Institute for Fiscal Studies, Working Paper 01/20 (London), November 2001; J. Van Reenen, *No More Skivvy Schemes? Active Labor Market Policies and the British New Deal for the Young Unemployed in Context*, The Institute for Fiscal Studies, Working Paper 01/09 (London), May 2001.

[198] D. Grubb, op. cit.

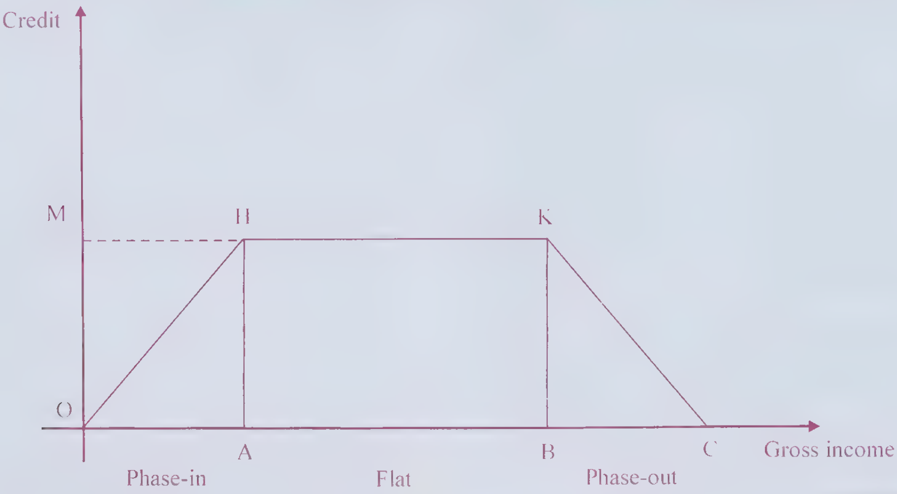
[199] OECD, *Employment Outlook* (Paris), June 2000, p. 142, box 2.

[200] P. Auer, *Employment Revival in Europe: Labour Market Success in Austria, Denmark, Ireland and the Netherlands* (Geneva, ILO, 2000).

[201] As summarized in D. Grubb, op. cit.

CHART 4.3.1

The design of an employment-conditional incentive: phase-in and phase-out regions



Wage subsidies for low-wage employees sometimes operate also in conjunction with ECI. They can take the form either of employment subsidies to employers or of reductions of employers' social security contributions and can take several forms (e.g. subsidies or credits proportional to part or all of the annual wage, lump-sum amounts or re-employment bonuses to be redeemed by employers, etc.). Perhaps the most successful (at least in terms of the take-up rate) scheme that has been tried in Europe is the Dutch SPAK, which is relatively simple to administer and is permanent, that is, it is provided throughout an individual's entire work experience subject to wages being below a given threshold.[202] Most wage subsidies in the EU are instead temporary, which may have perverse effects on turnover and reward high turnover firms and industries.

Wage subsidies shift out the labour demand curve, as depicted in chart 4.3.2, hence their effects on employment are larger the more elastic are labour demand and supply. There is, however, considerable uncertainty as to the elasticity of labour demand for low-wage workers, and somewhat less as to the elasticities of labour supply. When the labour supply elasticity is larger than that for demand, the earnings effect of a wage subsidy is larger than the employment effect. Many calculations underlying the proposal for payroll tax reductions in Europe[203] have probably overestimated these elasticities.

Wage subsidies, like an ECI, can generate deadweight losses in the form of windfall beneficiaries (i.e. individuals who would have found employment anyway), substitute subsidized workers for other groups, such as employed young workers, and displace firms not employing subsidized workers. They can also have fiscal crowding out effects insofar as the subsidy needs to be financed by increasing tax rates. The deadweight costs generated by windfall beneficiaries could be eliminated by using true marginal employment subsidies, i.e. subsidies only to job openings that would not have occurred in the absence of the subsidy. But clearly the informational requirements for such subsidies are unattainable. Many countries have proxied marginal subsidies with incremental subsidies, i.e. subsidies to employment beyond a certain increment over the previous year's level and reduced access to firms that did not lay off workers in the previous year. But such subsidies can generate perverse incentives for firms to implement large lay-offs followed by large hirings, and so they may end up by subsidizing high turnover sectors and firms.

When integrated with (low) minimum wages, however, these subsidies can be rather effective in reducing the informal sector as they create incentives for both employers and employees to declare low productivity jobs. This can be very important for the countries of southern Europe, which all have a sizeable "shadow sector".

4.4 Final remarks

Are the goals set out in Lisbon attainable? Very much will depend on the pace and comprehensiveness of the ongoing reforms of European labour markets and social policy institutions. The evidence collected in this paper suggests that much is going on and that some of the

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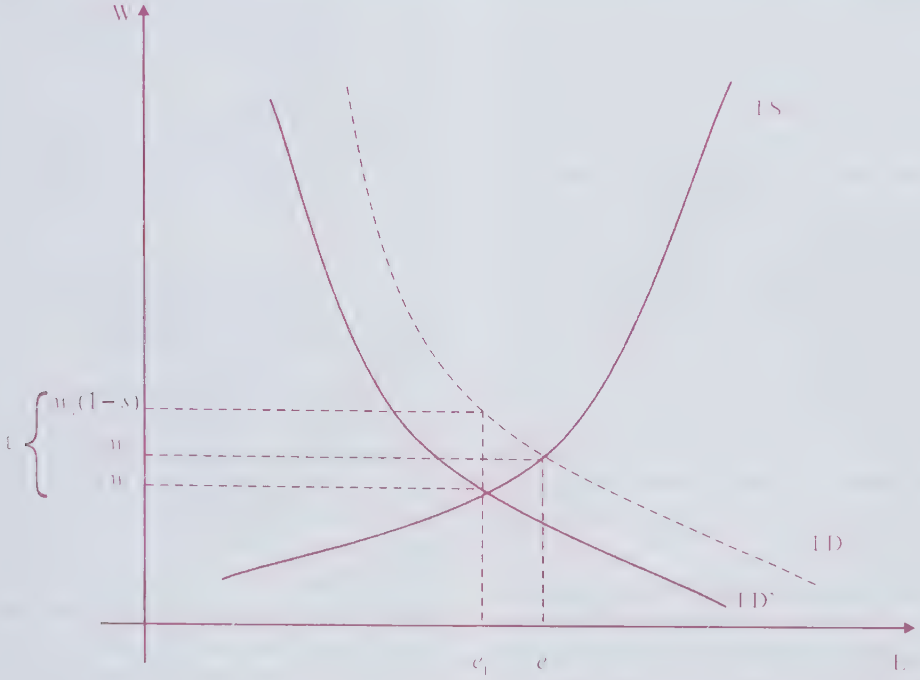
[202] M. Doudeijns, M. Einerhand and A. Van de Meerendonk, "Financial incentives to take up low-paid work: an international comparison of the role of tax and benefit system", in W. Salverda, C. Lucifora and B. Nolan (eds.), *Policy Measures for Low-wage Employment in Europe* (Cheltenham, Edward Elgar, 2000), pp. 43-46.

[203] J. Drèze and E. Malinvaud, "Growth and employment: the scope of a European initiative", *European Economic Review*, Vol. 38, Issues 3-4, April 1994, pp. 489-504.

CHART 4.3.2

Effects of wage subsidies



gloomy predictions as to the effects of EMU are far from materializing. Yet, reforms are very gradual and piecemeal and for this very reason can be reversed. Overall, longer time-series are needed to evaluate the impact of EMU and more work needs to be done on the political economy of reforms before informed guesses as to the likelihood of the Lisbon scenario can be made.

What is sure is that the European institutional landscape will have to change further and quite radically to accommodate higher employment rates, such as those targeted in the Lisbon scenario, notably in the southern and continental countries of Europe. There is a need for more pro-work social policies (e.g. conditioning income support on employment) and activation measures. This is indispensable in order to reconcile policies reducing income inequalities, which are deeply rooted in the European landscape, with those required to increase the size of European labour markets.

The size of the European markets for labour can also be increased by decentralizing collective bargaining in such a way as to allow wages to better reflect regional differences in labour productivity levels; unions would remain rooted in the workplace, but their influence would no longer reach beyond their locality. To attain the Lisbon targets, notably those concerning the participation of older workers, reforms of pension systems are also needed to discourage early retirement and reverse the trend towards lower participation of older workers. Although reforms of pension systems and of collective bargaining institutions are not addressed in this paper, they will also need to play a very important role in moving towards Lisbon.

DISCUSSANTS' COMMENTS

4.A Vladimir Gimpelson

Professor Boeri has presented an excellent paper on the size of the labour force in Europe. It will definitely stimulate our further thinking on the functioning of the labour markets. As he points out, increasing the size of labour force is a serious challenge but not without costs. Higher employment rates and socially acceptable equity levels are subject to trade-offs. Raising the employment to population ratio reduces equity in the labour market since the increase is only likely to be brought about by drawing in people to the less productive and less well-paid jobs. So, the additional employment is likely to consist of an expansion of marginal jobs. Basically, I agree with this position.

I believe the experience of the transition countries over the last decade illustrates this trend. Countries that have managed to maintain high levels of employment despite large falls in GDP are now faced with an excessive number of various forms of "bad" jobs. These low-productivity jobs provided a cushion against high rates of unemployment but they have also contributed to growing inequality.[204] In this respect, the examples of Russia and Ukraine, economies which have been hard hit by wage arrears, reduced working hours and informal employment, are highly relevant.

My intention here is to look eastwards from the region discussed in Professor Boeri's paper. Since the Russian labour market operates in a markedly different context and Russia is not in the direct race towards the Lisbon targets I will focus on the following issues:

- What has happened to participation and employment/population rates in the period since the start of reforms?
- Which population groups have contributed most to the change in labour market participation?
- What is going to happen to the Russian labour force in the future if participation rates remain constant?

All the data upon which I base my analysis are from regularly conducted labour force surveys (LFSs).

What has happened to participation and employment/population rates in the period since the start of reforms?

Russia, as well as many other post-communist countries, entered the transition in the early 1990s with very high participation rates. This was especially marked in the case of female employment. At least, the rates were much higher than in other countries with comparable levels of per capita income. Once the transition began, one could have expected a rapid and significant decline in participation. In fact, the decline in labour force participation did occur in Russia but on a much smaller scale than expected.

Employment to population ratios (for the working-age population)[205] fell from 80 per cent in 1992 to a low of around 65 per cent, in the aftermath of the financial crisis in 1998. Subsequently, and in response to a partial recovery in GDP and aggregate labour demand, the ratio recovered to around 70 per cent. (Thus, in terms of the Lisbon target Russia is already there!) While employment in large and medium-sized enterprises remained constant, all types of informal and semi-formal employment increased in share and size. For the period since 1999, the official employment estimates allow for those whose main activity is in household-based informal production intended for sale in the market. This adds a few more percentage points to the total, taking the employment/working-age population ratio to above 72 per cent. Such a very high level is observed mostly in the Nordic and Anglo-Saxon countries and is notably higher than in the rest of Europe.

How significant was the employment adjustment in the 1990s? On the one hand, a 15 percentage point fall over seven years signifies a serious shock. On the other hand, this compares with a fall in GDP, which was more than twice as large over the period 1992-1998. This employment adjustment was accommodated largely by an outflow from the labour force, while the growth in unemployment accounted for less than half the total fall in employment. Of course, maintaining the high employment rate reflects the political choice Russia made in the trade-off between employment and inequality.[206] The Gini coefficient of inequality grew markedly during the first three years of transition and the proportion of those in low-productivity jobs, including those underemployed and informally employed, increased drastically. Therefore, the main challenge now is not so much to increase total employment but to reduce the fraction in informal and low-productivity activities while keeping the total unchanged.

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[204] H. Lehmann and J. Wadsworth, *Wage Arrears and Distribution of Earnings in Russia*, IZA Discussion Paper, No. 410 (Bonn), December 2001.

[205] In Russia the working age is 16-59 for men and 16-54 for women.

[206] V. Gimpelson, "The politics of the labor market adjustment (the case of Russia)", in J. Kornai, S. Haggard and R. Kaufman (eds.), *Reforming the State: Fiscal and Welfare Reform in Post-Socialist Countries* (Cambridge, Cambridge University Press, 2001).

Which population groups have contributed most to the change in labour market participation?

The LFS data suggest that the labour market participation of both men and women has fallen. We might have expected women to have left employment on a relatively larger scale due to the combination of their initially high rates in labour market involvement and potential gender discrimination. However, this does not appear to be the case in the aggregate data: the participation rates for both sexes have fallen and then recovered (since 1999) almost simultaneously.

The very high labour force participation of women in Russia is usually considered to be a socialist legacy. This is true. However, this legacy has provided women with employment experience (including vocational education, skills, networks, etc.) that helps them to remain employed despite the recent adverse conditions. Otherwise the labour market situation for women would probably have been much more complicated.

Data for various age groups show that it is the younger and oldest age groups in the working-age population that have withdrawn from the labour market to a much greater extent than those in the middle of the age distribution. *Ex ante* one might have expected a different picture due to the negative income effect on these groups. Actually, those in the middle have shown very limited withdrawal from the labour market. All this has brought about a much steeper distribution of labour market participants by age. In the younger ages there was an upsurge in higher education enrolment rates in the 1990s. Those in the older age groups partly moved from formal employment in enterprises to various forms of informal or semiformal work.

The picture of labour market participation by age groups corresponds well with participation trends by educational groups. Those with low levels of education appear to have left the labour market first and they tend to be in the youngest and the oldest age categories.

The rural population has been more prone to leave the labour force due to the more adverse conditions it has faced. However, this withdrawal is partially offset by increased levels of informal employment that until recently could not be measured by standard labour force surveys.

Clearly, all these changes have resulted from a number of factors, many of which have affected the labour force in opposite directions. Unfortunately, I do not know of any studies where all these factors have been properly identified and measured. This is a big job waiting to be done.

What is going to happen to the Russian labour force in the future if participation rates remain constant?

Finally, let me try to estimate future trends in the Russian labour force. We can "marry" demographic projections by gender and age groups with their expected participation rates. Although the main demographic scenarios vary with respect to the expected birth and mortality rates and migration, the differences between the scenarios within the next 15 years are rather modest. Beyond that they are likely to become more pronounced. If we combine the middle scenario with the participation rates actually observed in 2000, the analysis shows that major fluctuations in participation over the next 10-15 years are unlikely to happen. The participation of prime-age groups in the labour market is already very high and can hardly rise any further. Since their participation rate has been practically institutionalized as a social norm and has successfully survived the major transition shock, any significant fall in the mid-term future would seem very unlikely. If changes occur in some of the marginal age and gender groups, their aggregate effect will be modest due to their limited share in the total labour force.

The obvious conclusions are the following:

- The size of the labour force will grow modestly until 2007-2008, after which it will fall. By 2013, the total size of the Russian labour force will be smaller than it is now, but the age structure will age rapidly. Raising the retirement age (which is still very low) will have an impact on the size of the labour force. This will, of course, affect the participation rates of the older age groups;
- The ratio of the economically active to the inactive population will grow from around 1.7 in 2000 to almost 2 in 2013, after which it will start to fall steadily.

If we move beyond the 15-year period, the labour force trends become even more downward looking. From what has been said above, the size of the labour force is then likely to become a serious constraint on Russian economic growth. Just maintaining the current participation rate will not be much help. Increasing the size of the labour force would be possible through a deliberate stimulation of immigration and/or increasing the pensionable age. Both policies are politically very sensitive; however, there are few alternatives to them and the Russian government should already be paying more attention to the prospective challenges associated with the size of the labour force.

4.B Jan van Ours

In my opinion Tito Boeri gives a clear overview of the relevant issues related to the question of how the size of the European labour force can be increased. I agree to a large extent with his proposed strategy to raise employment rates sufficiently to meet the targets set at the European Summit in Lisbon by relying on the introduction of in-work benefits and activation measures. In my comments I shall add to this by discussing the activation of the non-employed, focusing on the questions "where?" and "how?".

TABLE 4.B.1

Employment rates of prime-age workers, 1990 and 2000

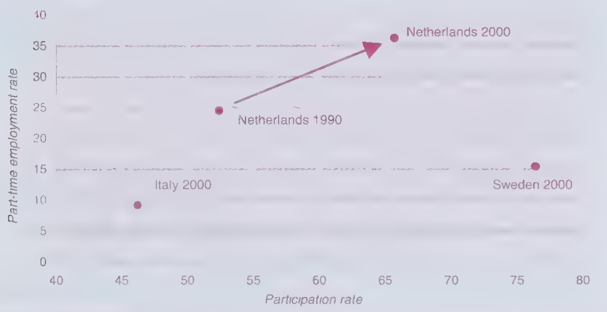
	Males			Females		
	1990	*2000*	*Δ*	*1990*	*2000*	*Δ*
Italy	90.2	84.6	-5.6	46.2	50.7	+4.5
Netherlands	88.8	92.2	+3.4	51.6	70.9	+19.3
Sweden	93.5	85.8	-8.7	89.7	81.7	-8.0

Source: OECD, *Employment Outlook* (Paris), 2001.

CHART 4.B.1

Participation and part-time employment rates for females

(Per cent of population)



Source: As for table 4.B.1.

TABLE 4.B.2

Employment rates of males and females, aged 55-64 years, in 2000

	Males	*Females*
Italy	40.3	15.3
Netherlands	49.9	25.8
Sweden	67.8	62.5

Source: As for table 4.B.1.

Concerning the question where the activation of the non-employed is most efficient, I distinguish between prime-age males, prime-age females and elderly workers. According to Boeri the Nordic countries are already at the required Lisbon level whereas countries in southern Europe are far below the required employment rates. Therefore, to illustrate my line of reasoning I use data from three countries: Italy, the Netherlands and Sweden. Table 4.B.1 shows the changes in employment rates for prime-age males and females.

It is clear that employment rates for prime-age males are high across Europe, between 85 and 95 per cent. Therefore, to further increase these employment rates will not be an easy task because many of the non-employed prime-age males are unskilled, long-term unemployed or disabled. Table 4.B.1 also shows that for the employment rates of prime-age females there are substantial differences across Europe. What is also striking is the huge increase of female employment rates in the Netherlands, the main reason for which is shown in chart 4.B.1: it is mainly the increase in part-time employment.

Concerning the employment rates for older workers, there is also substantial variation across Europe. As shown in table 4.B.2 these employment rates are substantially higher in Sweden than they are in Italy and the Netherlands. Employment rates for older males in many countries are low because of early retirement and disability, while they are low for elderly females because of a cohort effect. Nevertheless, in a country such as Sweden even among older workers employment rates are quite high. Most likely this is due to financial incentives related to early retirement, which are different for Swedish workers. Given that the cohort of older workers will increase in size as a result of the ageing of the population, there is a clear need to raise the employment rates of these workers.

Concerning the question of how to raise the employment rate, I agree to a large extent with Boeri when he advocates the “help and hassle” approach. To bring the long-term unemployed back to work, counselling and monitoring is extremely important. And, linked to monitoring, there should be a system of benefit sanctions, which has proved to be successful in several European countries. Apart from the long-term unemployed, the policy focus should be on prime-age females and elderly workers, two groups for which employment rates are quite low. In order to encourage higher employment rates among prime-age females, creating the right financial incentives may not be enough. It may be necessary to stimulate part-time employment especially in southern Europe where the employment rates are rather low. Also, to raise the employment rates of elderly workers financial incentives alone may be ineffective. A system of gradual retirement with part-time jobs is required to replace the current system of early retirement.

CHAPTER 5

CAN INTERNATIONAL MIGRATION SOLVE THE PROBLEMS OF EUROPEAN LABOUR MARKETS?

Herbert Brücker[207]

5.1 Introduction

International migration is one of the most controversial issues in the current debate on economic and social policies in Europe. On the one hand, it is blamed for unemployment and increasing inequality in the host countries; on the other, some hope that it can mitigate employment shocks and alleviate the demographic burden of Europe's rapidly ageing population. The majority of the populations in the host countries in Europe, however, perceive immigration to be a burden rather than a solution to their economic and social problems. According to the Eurobarometer survey (an opinion poll conducted twice a year in all member countries of the European Union) the attitude of the majority of natives in the EU can be summarized as follows: immigrants cause unemployment; they abuse the welfare state; and the presence of foreign nationals has reached or even exceeded its saturation point. The outcome of recent elections in Austria, Belgium, Denmark, France and the Netherlands demonstrates that hostile attitudes towards immigration are widespread in the host countries.

European migration policies over the last few decades have reflected these anxieties. Although the barriers to migration between the members of the EU and European Economic Area (EEA) have been removed to an extent which is unique among regional trade areas, immigration policies vis-à-vis non-EU and non-EEA countries have become more and more restrictive following the first oil-price shock in 1973. Non-EU and non-EEA countries have nevertheless become the main source of immigration into western Europe over the last three decades and they will become even more important in the future, due to the convergence of per capita incomes in the EU and the declining propensity to migrate within western Europe caused by ageing populations.

The restrictive approach of western Europe toward immigration from non-EU and non-EEA countries is challenged by three main trends: first, the populations in western Europe – and also in other areas of the world – are ageing rapidly. Against this background, the current structure of revenues and expenditures of the public finances and social security systems is not sustainable. Second, the skill level of immigrants and, as a consequence, their labour market performance, has deteriorated over the last decades. Restrictive migration policies have reinforced this trend, since migration has mainly comprised family reunification, humanitarian and illegal migration. Third, the restrictions to emigration have been dismantled in a region of almost 400 million people following the demise of communism in eastern Europe. Given that the average per capita GDP level in this area amounts to around 20 per cent of that in western Europe, this creates a considerable potential supply of relatively high-skilled workers for future migration.

A review of European migration policies is thus on the agenda for the next decade. The objective of this paper is to analyse the implications of a change in European migration policies on the labour market and welfare from an economic perspective. Three issues are addressed: first, whether the international migration of labour is a zero-sum game or whether it yields a net gain for the economies involved; second, how the benefits and costs of labour migration are distributed between the host and the source countries and the different factors of production; and third, whether international migration yields fiscal benefits or losses when taking into account demographic change. Although international labour migration has many facets, this paper concentrates on a few important questions, instead of covering all the relevant aspects in significantly less detail.

The paper is organized as follows: first, in order to establish the institutional and quantitative background, key facts on European migration policies, the scale of European migration in the main host and source regions, and stylized facts about the socio-economic characteristics of European migrants are presented in section 5.2. The impact of labour migration on income, wages, unemployment and the distribution of income is then analysed in both the host and the source regions. In the first step, the analysis is based on the calibration of a simple equilibrium model, which allows the implications of migration to be simulated with wage rigidities and persistent unemployment, with regional wage and employment differences, and with different levels of welfare benefits. In the second step, the results of the simulations are compared with the findings of empirical studies (section 5.3). Next the fiscal implications of migration are discussed, taking the rapidly ageing populations in Europe into account. A generational accounting approach is used to analyse whether international migration can help to improve the sustainability of public finances (section 5.4). Finally, the study's findings are summarized in section 5.5.

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[207] The author wishes to thank Stanislawa Golinowska, Ágnes Hárs, Georg Fischer, Juan Jimeno and the participants of the UNECE Spring Seminar 2002 for many useful comments. However, I am responsible for any errors and ommissions in this paper.

5.2. Key trends in European migration

International migration in Europe has been greatly influenced by institutional barriers. On the one hand, the barriers to migration among western European countries have been removed to an extent which is unique among regional trade areas. On the other hand, west European barriers to immigration from the southern and south-eastern European countries were increased following the 1973 economic recession. Although the demise of communism involved the removal of emigration barriers in a region of almost 400 million people, the present restrictions in western Europe have effectively prevented large-scale migration from the east to the west (section 5.2(i)).

In relative terms, the scale of European migration is well below that of Australia, New Zealand and North America. Nevertheless, in absolute terms, western Europe is the main target for international migration after North America: it has received some 15 million immigrants since the Second World War and its foreign population stood at around 20 million people in 2000. International migration in Europe is largely a regional phenomenon, i.e. three quarters of the foreign population in western Europe originate from southern and south-eastern Europe and neighbouring regions in northern Africa and eastern Europe (section 5.2(ii)).

The country of origin mix of European migration has changed over the last three decades. In the 1960s and 1970s, most of the foreign population and labour force in western Europe originated from the southern members of the present European Union (EU). However, since then the main sources of European migration have been non-EU countries in south-eastern Europe and northern Africa. This change in the country of origin mix is associated with the increasing differences in income per head and in human capital endowments between western Europe and these source countries (section 5.2(iii)).

The change in the country of origin mix affects the socio-economic characteristics of migrants. On average, the human capital endowments of migrants are well below those of natives. Consequently, the labour market performance of migrants lags behind that of natives and their welfare dependency ratios are also above those of natives. However, averages can mask significant differences between groups. Migrants from other EU countries and, more importantly for the future, from central and eastern Europe possess better qualifications, and are less affected by unemployment and welfare dependency relative to other groups of immigrants and even to natives (section 5.2(iv)).[208]

(i) The European income gap and barriers to labour migration

Migration policies still divide Europe into west and east. Chart 5.2.1 displays per capita GNP measured in purchasing power parities and the population in Europe and neighbouring regions in northern Africa and central Asia, which are important sources of migration into Europe. In western Europe,[209] the average level of per capita GNP is around $21,000. Moreover, with a range lying between $14,000 (Greece) and $26,000 (Switzerland), the income distribution across countries is relatively homogenous.[210] In eastern Europe average per capita GDP is $6,500, which is not much higher than that of the countries in northern Africa ($4,000).

The barriers to labour migration in Europe are closely related to the income gap. Within western Europe, legal and administrative barriers to labour migration have been largely removed. In 1957, the Treaty of Rome acknowledged the free movement of labour as one of the four fundamental freedoms of the Common Market. It was introduced for the citizens of the six founding members of the European Community who numbered 185 million people in 1968, and has since been extended to the 15 members of the present European Union[211] and the remaining three members[212] of the European Economic Area with a joint population of 380 million people. Among the European countries with a per capita GDP above $20,000, Switzerland is the only one that does not belong to the EEA.

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[208] This section draws partly on H. Brücker, B. McCormick, G. Epstein, G. St. Paul, A. Venturini and K. Zimmermann, "Managing migration in the European welfare state", in T. Boeri, G. Hanson and B. McCormick (eds.), *Immigration Policy and the Welfare System* (Oxford, Oxford University Press, 2002), pp. 1-167.

[209] Western Europe is taken to include the 15 EU members, the three other members of the European Economic Area (Iceland, Liechtenstein, Norway) and Switzerland; eastern Europe, the members of the former Council of Mutual Assistance (CMEA), Albania, Turkey and Yugoslavia. Thus, the terms "east" and "west" are used in a political rather than a strict geographical sense.

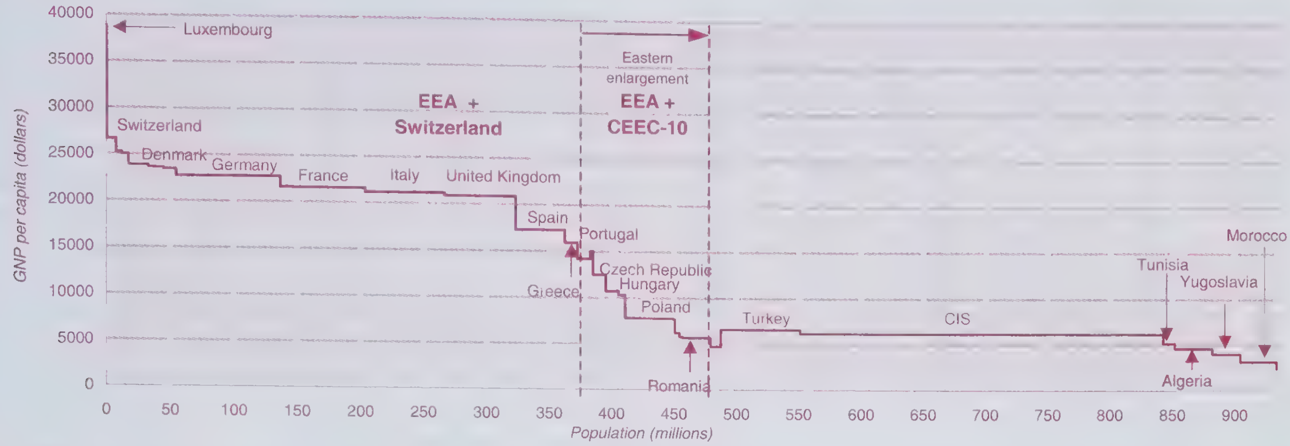
[210] Luxembourg, an urban state with a per capita GDP of $40,000, is an exception.

[211] Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, United Kingdom.

[212] Iceland, Liechtenstein, Norway.

CHART 5.2.1

Per capita GNP[a] and size of population in Europe and neighbouring regions, 1999
(Dollars, persons)



Source: Author's calculations based on demographic figures from the United Nations Population Division, 2002, and GNP figures from the World Bank, *World Development Indicators* (Washington, D.C.), 2001.

[a] Expressed in purchasing power parity.

The free movement of labour entitles EEA citizens to work and reside in other member countries. More specifically, this comprises the right to seek employment in other member countries, to move there to search for employment, to reside there for the purpose of employment, and to remain there following the completion of employment. The *acquis communautaire*, i.e. the common set of rules of the EU, demands equal treatment of EU citizens in respect to employment, occupation, remuneration and other work-related conditions. The principle of equal treatment requires that EU and EEA citizens enjoy the same level of protection under the social security system (of any member country) as the natives. A number of EU regulations try, albeit with limited success, to prevent national pension schemes from disadvantaging migrant workers. However, several provisions at EU and national levels protect social security systems against "welfare shopping": nationals from other EU and EEA countries are only admitted if they can prove they have sufficient funds to support themselves; residence permits can be withdrawn if migrant households rely on social assistance. In some member countries special provisions exclude foreigners who emigrated with the sole purpose of claiming social welfare benefits. In practice, the access of EU and EEA citizens to welfare benefits in host countries depends largely on the duration of their stay.[213]

Although barriers to labour migration have largely been removed within the EU and the EEA, no more than a third of the foreign population in the EEA originates from other EEA member countries. Migration policies vis-à-vis non-EU and non-EEA members remain, however, largely in the domain of national policies. Non-EU and non-EEA citizens are consequently excluded from the rules governing the free movement of labour within the community: residency and work permits cannot be transferred to other EU and EEA countries. Both national and EU regulations give preferential treatment to nationals and citizens from other EU and EEA countries: non-EEA citizens are only admitted to the labour market if it can be proved that the relevant position cannot be filled by a citizen of an EEA country.

In general, migration policies vis-à-vis non-EU and non-EEA members were tightened after the first oil-price shock in 1973. The active recruitment of foreign labour from non-EU and non-EEA countries has since ceased in almost all EEA countries. These restrictions contributed to the reduction of migration flows in the 1970s and the 1980s, but the share of non-EEA citizens in the foreign population in western Europe has nonetheless increased continuously since the 1970s. Family reunification, humanitarian migration and illegal migration have become the main channels for immigration from non-EU and non-EEA countries (table 5.2.1).[214]

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[213] For a detailed description of the institutional conditions for labour migration in the EU and the EEA, see H. Brücker et al., "Managing migration ...", op. cit.; A. Hänlein, J. Kruse, H.-J. Reinhard and B. Schulte, "Rechtliche Aspekte: Arbeitnehmerfreizügigkeit und Zugangsbedingungen zum deutschen Sozialsystem nach geltendem EU-Recht", in H.-W. Sinn, G. Flaig, M. Werding, S. Munz, N. Düll and H. Hofmann (eds.), *EU-Erweiterung und Arbeitskräftemigration, Wege zu einer schrittweisen Annäherung der Arbeitsmärkte* (Munich, ifo-Institut für Wirtschaftsforschung, 2000), pp. 121-158.

[214] T. Bauer and K. Zimmermann, "Looking south and east, labour market implications of migration in Europe and LDCs", in O. Memedovic, A. Kuyvenhoven and W. Molle (eds.), *Globalization and Labour Markets. Challenges, Adjustment and Policy Responses in the EU and the LDCs* (Dordrecht, Kluver, 1997), pp. 75-103.

TABLE 5.2.1

The main channels of entry into selected host countries, 1998
(Per cent of total immigrants)

	Labour migrants	*Family reunification*	*Asylum seekers*	*Others* [a]
France [b]	21	55	10	16
Italy [c]	50	39	3	8
Sweden [d]	2	55	21	22
Switzerland [e]	50	45	5	–
United Kingdom [f]	45	50	5	–
Australia [g]	34	26	11	29
Canada [g]	55	29	13	3
United States [g]	12	72	8	8

Source: H. Brücker, B. McCormick, G. Epstein, G. St. Paul, A. Venturini and K. Zimmermann, "Managing migration in the European welfare state", in T. Boeri, G. Hanson and B. McCormick (eds.), *Immigration Policy and the Welfare System* (Oxford, Oxford University Press, 2002), pp. 1-167; SOPEMI, OECD, *Trends in International Migration* (Paris), 2000; national statistics for Italy (average 1998-1999).

[a] Including students, visitors, etc. with the exception of Switzerland and the United Kingdom. Totals do not therefore add up to 100.

[b] 1996.

[c] 1999.

[d] 1997.

[e] OECD, op. cit., p. 258, gives a different split for 1998 inflows: 31 per cent family reunion, 36 per cent employment.

[f] Passenger figures excluding European Economic Area nationals in the United Kingdom. The data only include certain categories of migrants: work permit holders, spouses and refugees. The category "labour migrants" includes Commonwealth citizens with United Kingdom ancestry.

[g] Inflows of permanent settlers, 1998.

After the demise of communism, the barriers preventing emigration from the former CMEA countries and Albania, which have a joint population of almost 400 million people, were removed. However, apart from a few exceptions, e.g. ethnic Germans from Poland, Romania and the former USSR, potential immigrants into western Europe from the central and east European countries (CEECs) face the same set of restrictions as those from other non-EU and non-EEA countries. The Europe Agreements between the EU and the 10 central and eastern European accession candidate countries, in contrast to the markets for goods and capital, do not provide access to the EU's labour markets.[215] Current EU members have suggested transitional periods of up to seven years for labour migration following the accession of these countries to the EU. Note that the 10 candidate countries represent less than 30 per cent of the population of the former CMEA countries and that both their levels and growth rates of per capita GDP exceed by far those of the non-candidate countries. Migration among the eastern European countries themselves is far from liberalized. In particular, countries with relatively high per capita income levels try to protect their labour markets from an influx of foreign workers.

Altogether, migration policies divide Europe into two blocs, one of relatively wealthy countries in the west, where the level of institutional integration in the labour market is unique among the regional trade areas in the world, and the other of relatively poor countries in the (south-) east, whose access to labour markets in the EU and the EEA is restricted by a broad set of institutional barriers. The same set of restrictions applies to the Mediterranean countries in northern Africa. The accession of central and eastern European candidate countries will only change this general picture to a moderate extent: per capita GDP levels are higher in the CEECs than in the other source countries and the restrictions on migration into the present EU countries will only be removed gradually.

(ii) The scale of migration in Europe

After North America, western Europe is the main destination for international migration, although net migration rates are substantially lower than those of Australia, Canada and the United States. Cumulative net migration flows into the EEA[216] and Switzerland are estimated to have been around 15 million people between 1950 and 2000, compared with 37 million into Canada and the United States and 5 million into Australia and New Zealand. The average annual net migration inflow into the EEA and Switzerland between 1950 and 2000 was some 0.8 people per thousand, compared with 3 per thousand in Canada and the United States, 5.7 per thousand in Australia and New Zealand, and almost zero per thousand in Japan (table 5.2.2).

Migration flows into Europe have accelerated since the Second World War, although the trend has been characterized by several breaks. After full-employment had been achieved in the mid-1950s, the recruitment of foreign labour involved substantial migration from the south to northern Europe, which reached a preliminary peak in the 1960s. In the aftermath of the 1973 recession and in the face of increasing restrictions, south-north migration declined (chart 5.2.2). In the 1990s, net migration flows into the EEA started to accelerate again and reached 2.2 persons per thousand, which corresponded to a cumulate net inflow of some 8.5 million people. This is still below that of Canada and the United States, where annual net immigration flows accelerated to 4.2 persons per thousand in the 1990s, or a total inflow of 13.3 million people.

Within western Europe, there are large differences in the scale of immigration: more than 80 per cent of the cumulative inflows into the EEA are absorbed by France,

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[215] T. Boeri, H. Brücker et al., *The Impact of Eastern Enlargement on Employment and Labour Markets in the EU Member States*, Employment and Social Affairs Directorate-General of the European Commission (Berlin and Milan), 2000 (http://www.diw.de/english/abteilungen/wlt/publikationen).

[216] Net migration rates in the EU-15 are identical to those of the EEA countries.

TABLE 5.2.2

Net migration flows into western Europe, 1950-2000

(Thousands, per cent)

	Annual net migration saldo [a]			*Cumulative net flow (+ inflow, - outflow)*					
	1950-2000	*1960-2000*	*1990-2000*	*1950-2000*		*1960-2000*		*1990-2000*	
	Net migration rate per thousand			*Thousands*	*Per cent of population*	*Thousands*	*Per cent of population*	*Thousands*	*Per cent of population*
Austria	1.3	2.0	3.6	473	5.9	602	7.5	294	3.6
Belgium	1.0	1.0	1.5	486	4.7	400	3.9	153	1.5
Denmark	0.7	1.1	2.5	167	3.1	226	4.2	129	2.4
Finland	-0.7	-0.4	1.2	-161	-3.1	-76	-1.5	64	1.2
France	1.8	1.8	1.0	4 828	8.2	3 855	6.5	585	1.0
Germany	2.5	2.7	4.4	9 506	11.6	8 495	10.4	3 638	4.4
Greece	0.6	1.2	4.2	268	2.5	469	4.4	442	4.2
Iceland	-0.9	-1.0	-0.4	-10	-3.5	-10	-3.5	-1	-0.4
Ireland	-3.6	-1.4	2.5	-586	-15.4	-194	-5.1	91	2.4
Italy	-0.3	0.1	2.1	-741	-1.3	273	0.5	1 177	2.0
Luxembourg	5.9	6.7	10.0	107	24.5	100	22.8	42	9.7
Netherlands	1.2	1.8	2.3	840	5.3	1 004	6.3	360	2.3
Norway	0.8	1.1	2.0	163	3.6	186	4.2	88	2.0
Portugal	-3.8	-3.0	0.4	-1 799	-18.0	-1 162	-11.6	35	0.4
Spain	-0.4	–	0.9	-724	-1.8	72	0.2	358	0.9
Sweden	1.8	2.0	2.2	755	8.5	670	7.6	194	2.2
Switzerland	3.5	3.1	3.3	1 111	15.5	804	11.2	235	3.3
United Kingdom	0.1	0.4	1.4	402	0.7	941	1.6	827	1.4
EEA and Switzerland	0.8	1.3	2.2	15 085	3.9	16 652	4.3	8 712	2.2
EU-15	0.8	1.1	2.2	13 821	3.7	15 673	4.2	8 390	2.2
Southern EU [b]	-0.6	-0.1	1.7	-2 996	-2.5	-349	-0.3	2 012	1.7
Memorandum items:									
Australia/New Zealand	5.7	5.3	5.1	463	2.0	3 917	17.1	1 134	4.9
Japan	0.1	0.1	0.4	4 873	3.8	510	0.4	442	0.3
North America [c]	3.0	3.1	4.4	36 969	11.8	32 794	10.4	13 324	4.2

Source: United Nations Population Division, *World Population Prospects – Population Database* (http://esa.un.org/unpp/), 16 April 2002; author's calculations.

[a] The net migration saldo is calculated as the rate of population growth minus the rate of natural population growth (crude birth rate minus crude mortality rate).

[b] Greece, Italy, Portugal, Spain.

[c] Canada, the United States.

Germany and the Netherlands. In relative terms, the cumulative inflows between 1950 and 2000 equalled 25 per cent of the present population of Luxembourg, 16 per cent of that in Switzerland, 11 per cent in Germany and 9 per cent in Sweden. In these countries, net migration is comparable to North America or to Australia and New Zealand. Ireland and the southern European EU members (Greece, Italy, Portugal, Spain) were an important source of immigration into the EEA during the 1960s and 1970s. Some of these countries, most notably Ireland and Portugal, lost a substantial part of their population through migration in the postwar period. However, the catch-up of per capita GDP levels in these countries led to a substantial increase in immigration during the 1980s and the 1990s. These net inflows consist of both return migration from the north, as well as increasing immigration from the Balkans and northern Africa.

The number of foreign residents reported by national statistics is higher than the cumulative net inflows, because natural population growth contributes substantially to the total. There are around 20 million foreign residents in EEA countries and Switzerland, or 5 per cent of the total population.[217] The highest proportions of foreign residents in the population are in Luxembourg (36 per cent), Switzerland (19 per cent), Austria (9 per cent) and Germany (9 per cent), while in southern Europe the shares are around 2 per cent (table 5.2.3).

Note that these figures rely on the concept of nationality, which implies that cross-country comparisons are affected by national differences in the concept of citizenship and different naturalization rates. Statistics on the foreign-born population are compiled only by a minority of EEA countries, so there is no uniform measure of the stock of migrants in Europe. Moreover, illegal migration is only partially covered by national censuses and demographic statistics. Europol[218] estimated the

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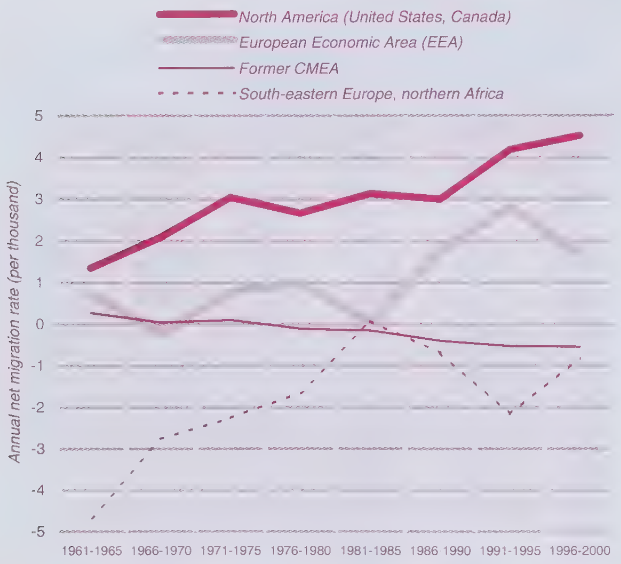
[217] Eurostat, *Yearbook* (Luxembourg), 2001; OECD, *Trends in International Migration: SOPEMI 2001 Edition* (Paris), March 2002.

[218] European Commission, *Communication from the Commission to the Council and European Parliament on a Community Immigration Policy*, COM 757/2000 (Brussels), 2000.

CHART 5.2.2

Net migration, 1961-2000



Source: Author's calculations based on data from the United Nations Population Division, 2002.

Note: Positive values indicate net immigration rate, negative values net emigration rate of the respective region.

annual inflow of illegal migrants into the EEA to be around 500,000 persons a year in the 1990s.[219] South-eastern Europe (Albania, Turkey, the former SFR of Yugoslavia) and north Africa (Algeria, Morocco, Tunisia) are the main sources of migration into the EU and the EEA. The average net outflow from south-east Europe reached 1.7 persons per thousand between 1960 and 2000, a cumulative outflow of 5.8 million persons; the net outflow from north Africa was 2.3 persons per thousand, or a total net outflow of 5.1 million persons. Around 40 per cent of foreign residents in the EEA originate from these two regions (table 5.2.4).

Given the income differences between east and west, migration from the former CMEA countries to western Europe has been fairly moderate. During the cold war, net migration rates in most of central and eastern Europe were negligible and remained so even after the removal of barriers to emigration: an annual net outflow of 1.2 persons per thousand for the 10 EU accession candidates, and 0.3 persons from the CIS. Contrary to popular opinion, this region, with a net migration of around 1 million persons, made only a modest contribution to net immigration into the EEA during the 1990s. However, the turmoil in the former SFR of Yugoslavia and the economic crisis in Albania triggered substantial emigration. It is also worth noting that east-west migration is only part of the story. The formation of new national states involved substantial migration flows between the successor states of the former USSR, which were driven by ethnic rather economic factors, such as differences in per capita income.[220] Similarly, the civil wars in the former SFR of Yugoslavia triggered substantial population flows within the region, which led to substantial increases in the populations of Croatia and Yugoslavia (Serbia and Montenegro).

(iii) A secular shift in the country of origin mix

Although EU migration policies vis-à-vis non-EEA countries have been restrictive since 1973, there has been a secular shift in the country of origin of the EU's foreign population. Since the early 1970s, the share of EU nationals residing in other countries has stagnated at around 1.5 per cent of the EU population, while the share of foreigners from non-EU countries increased from around 1.5 per cent to 3.3 per cent of the EU population between 1970 and 2000. In Germany, for example, the number of other EU citizens increased slightly from 1.6 million in 1970 to 1.8 million in 2000, while the number of non-EU nationals increased from 1.4 million to 5.5 million in the same period.

This shift in the country of origin of migrants in the EEA is towards countries with different socio-economic characteristics from the earlier sources of European migration: average GDP levels and human capital endowments in the source countries have declined substantially. Between 1967 and 1998, average GDP per head in the source countries of immigration into Germany declined from two thirds to one third of the German level (measured with purchasing power parities). There are also large and increasing differences in enrolment rates existing in secondary and tertiary education between the receiving and the source countries, and the latter are characterized by much larger degrees of income inequality than the former.[221]

The central and eastern European countries are an exception to this general picture. Although per capita income levels amount to one third or less of those in western Europe, formal education levels are rather similar, and even though qualitative indicators show that actual education levels in the CEECs are below those of western Europe, they are nonetheless well above those in south-east Europe and northern Africa. Although income inequality has increased in the CEECs since 1989, it is still no higher than in western Europe and certainly below that in the traditional sources of European migration.

Altogether, the shift in the origins of European migration has been towards countries with lower levels

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[219] This figure cannot be compared with the legal inflow of some 850,000 persons a year since the latter figure refers to net inflows, while the estimates of illegal immigration refer to gross inflows.

[220] L. Locher, *The Determination of a Migration Wave using Ethnicity and Community Ties*, Institute for the Study of Labour (IZA) Discussion Papers, No. 346 (Bonn), August 2001

[221] H. Brücker et al., "Managing migration ...", op. cit.

TABLE 5.2.3

Foreign residents by source country, 1998

(Thousands, per cent)

	Non-nationals		*of which:*									
			EU citizens		*South-eastern Europe*[a]		*Northern Africa*[b]		*CEEC-10*[c]		*CIS*[d]	
	Thousands	*Per cent of total population*	*Thousands*	*Per cent of non-nationals*	*Thousands*	*Per cent of non-nationals*	*Thousands*	*Per cent of non-nationals*	*Thousands*	*Per cent of non-nationals*	*Thousands*	*Per cent of non-nationals*
Austria	731	9.0	..	..	474	64.9	..	..	103[e]	14.1	..	..
Belgium	890	8.7	560	62.8	80	8.9	153	17.1	11	1.3	3	0.4
Denmark	238	4.5	49	20.6	69	29.0	4	1.8	9	3.9	4	0.4
Finland	73	1.4	14	19.3	6	7.7	1	1.2	13	17.5	30	12.7
France	3 597	6.1	1 322	36.7	250	7.0	1 393	38.7	22[e]	0.6	5	6.4
Germany	7 314	8.9	1 840	25.2	3 404	46.5	126	1.7	548	7.5	254	7.1
Greece	161	1.5	45	28.0	43	26.5	1	0.6	20	12.5	22	0.3
Iceland	5	1.8	2	47.1	..	..	..	–	1	17.6	–	0.1
Ireland	114	3.0	81	71.1	..	..	..	..	..[e]	0.2	..	..
Italy	885	1.5	134	15.1	89	10.1	168	19.0	56	6.3	6	5.0
Luxembourg	143	32.7	128	89.6	..	..	..	..	1[e]	0.5	..	..
Netherlands	680	4.3	188	27.7	160	23.5	141	20.8	11	1.7	5	3.5
Norway	157	3.5	64	40.8	22	13.8	2	1.1	..	..	2	0.3
Portugal	173	1.7	44	25.3	1	0.3	..	0.2	1	0.5	–	0.3
Spain	538	1.3	252	46.8	2	0.3	81	15.1	14	2.6	3	1.4
Sweden	527	6.0	178	33.8	117	22.2	3	0.5	26	5.0	7	1.3
Switzerland	1 370	19.1	827	60.4	388	28.3	11	0.8	7	0.5	6	1.1
United Kingdom	2 121	3.6	806	38.0	76	3.6	12	0.6	39	1.8	20	1.5
EEA and Switzerland	19 715	5.1	6 533	33.1	5 179	26.3	2 097	10.6	882	4.5	366	1.9
EU-15	18 023	4.8	5 594	31.0	4 727	26.2	2 084	11.6	854	4.7	336	1.9
Southern EU[f]	1 757	1.6	429	24.4	134	7.6	251	14.3	91	5.2	31	1.8

Source: Eurostat, *Yearbook* (Luxembourg) 2001; national sources; author's calculations.

[a] The former SFR of Yugoslavia, Turkey.

[b] Algeria, Morocco, Tunisia.

[c] Accession candidate countries from central and eastern Europe.

[d] Commonwealth of Independent States.

[e] Estimates based on labour force survey data.

[f] Greece, Italy, Portugal, Spain.

of per capita income and education, and greater income inequality. This shift occurred despite more and more restrictive immigration policies vis-à-vis non-EEA countries. Evidence from Germany indicates that the tightening of policies in the 1973 recession had a substantial impact on the scale of migration, particularly from south-eastern Europe.[222] An unintended side-effect: since immigration was subsequently channelled mainly through family reunification, humanitarian migration and illegal migration, the skills endowment of the migrant population deteriorated over time – at least relative to those countries which selected migrants on the basis of human capital criteria.

(iv) What do we know about the human capital characteristics of migrants?

The human capital characteristics of the current migrant population in western Europe can be summarized by the following stylized facts:

1) *Migrants are younger than natives.* While 17 per cent of the native population of the EU is aged over 65, the proportion of non-EU citizens in this age group is only 4 per cent (table 5.2.5). The age of recent arrivals is, not surprisingly, lower than that of the total foreign population: more than 85 per cent of such arrivals in the United Kingdom and Germany are younger than 40.[223]

2) *The proportion of males in the migrant population is above that in the native population.* The proportion of males in the foreign population of the EU is around 60

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[222] T. Boeri, H. Brücker et al., op. cit.; H. Brücker, "Die Folgen der Freizügigkeit für die Ost-West-Migration. Schlussfolgerungen aus einer Zeitreihenanalyse der Migration nach Deutschland, 1967-1998" (The consequences of free movement for east-west migration – lessons from a time-series analysis of migration into Germany, 1967-1988), *Beiheft der Konjunkturpolitik* (Applied Economics Quarterly, Supplement), No. 52, 2001, pp. 17-54.

[223] H. Brücker et al., "Managing migration ...", op. cit.; Eurostat, Labour Force Survey (Luxembourg), 1999.

TABLE 5.2.4

Net migration flows in the source countries of European migration, 1950-2000
(Thousands, per cent)

	Annual net migration saldo [a]			*Cumulative net flow (+ inflow, - outflow)*					
	1950-2000	*1960-2000*	*1990-2000*	*1950-2000*		*1960-2000*		*1990-2000*	
	Net migration rate per thousand			*Thousands*	*Per cent of population*	*Thousands*	*Per cent of population*	*Thousands*	*Per cent of population*
Albania	-5.4	-6.2	-21.8	-661	-21.1	-668	-21.3	-690	-22.0
Turkey	-0.9	-1.0	-0.8	-1 952	-2.9	-1 977	-3.0	-513	-0.8
Former SFR of Yugoslavia [b]	-1.7	-1.5	-0.7	-1 599	-7.5	-1 175	-5.5	-140	-0.7
Bosnia and Herzegovina	-5.7	-5.6	-9.5	-1 039	-26.1	-857	-21.5	-350	-8.8
Croatia	-0.5	0.2	2.8	-113	-2.4	27	0.6	130	2.8
Yugoslavia	-0.2	-0.2	1.0	-78	-0.7	-88	-0.8	105	1.0
The former Yugoslav Republic of Macedonia	-4.3	-3.6	-1.3	-368	-18.1	-257	-12.7	-25	-1.2
South-eastern Europe [c]	-1.7	-1.4	-1.5	-5 810	-6.4	-3 820	-4.2	-1 343	-1.5
Bulgaria	-2.4	-2.5	-4.8	-1 008	-12.7	-843	-10.6	-392	-4.9
Czech Republic	0.3	0.3	0.8	153	1.5	116	1.1	88	0.9
Estonia	1.9	1.3	-8.5	131	9.4	73	5.2	-122	-8.7
Hungary	-0.9	-0.6	-0.5	-439	-4.4	-249	-2.5	-50	-0.5
Latvia	2.2	2.0	-5.5	264	10.9	202	8.4	-135	-5.6
Lithuania	0.4	1.3	-1.1	67	1.8	179	4.8	-39	-1.1
Poland	-0.8	-0.8	-0.5	-1 446	-3.7	-1 138	-2.9	-174	-0.4
Romania	-1.2	-1.2	-2.6	-1 210	-5.4	-1 031	-4.6	-578	-2.6
Slovakia	-0.3	-0.7	0.4	-65	-1.2	-138	-2.6	22	0.4
Slovenia	0.8	1.7	3.8	74	3.7	124	6.2	75	3.8
CEEC-10	-0.7	-0.7	-1.2	-3 483	-3.3	-2 732	-2.6	-1 297	-1.2
Belarus	-1.5	-0.5	1.4	-615	-6.0	-171	-1.7	139	1.3
Kazakhstan	-0.8	-4.0	-12.1	-549	-3.4	-2 373	-14.7	-1 991	-12.3
Russian Federation	0.4	0.8	2.2	2 880	2.0	4 289	2.9	3 234	2.2
Ukraine	0.2	0.4	-0.3	429	0.9	809	1.6	-161	-0.3
Uzbekistan	-0.4	-0.6	-1.8	-335	-1.3	-382	-1.5	-428	-1.7
CIS [d]	–	–	-0.3	412	0.1	88	–	-788	-0.3
Algeria	-2.4	-1.8	-1.4	-2 205	-7.3	-1 451	-4.8	-411	-1.4
Morocco	-2.0	-2.2	-1.5	-1 907	-6.4	-1 901	-6.4	-428	-1.4
Tunisia	-3.1	-2.5	-0.9	-982	-10.4	-688	-7.3	-83	-0.9
Northern Africa [e]	-2.3	-2.1	-1.4	-5 094	-7.3	-4 040	-5.8	-922	-1.3

Source: As for table 5.2.2.

[a] The net migration saldo is calculated as the rate of population growth minus the rate of natural population growth (crude birth rate minus crude mortality rate).

[b] Including Slovenia.

[c] Albania, the former SFR of Yugoslavia, Turkey.

[d] Commonwealth of Independent States.

[e] Algeria, Morocco, Tunisia.

TABLE 5.2.5

Age distribution of migrants and natives in the EU,[a] 1999
(Per cent of total population)

		Non-nationals	
	Nationals	*EU*	*Non-EU*
0-14 years	17.0	11.0	21.4
15-24 years	12.3	10.3	15.2
25-49 years	36.2	46.1	47.2
50-64 years	17.9	21.5	12.5
65 years and above	16.6	11.0	3.7
15-64 years	66.4	77.9	74.9

Source: H. Brücker, B. McCormick, G. Epstein, G. St. Paul, A. Venturini and K. Zimmermann, "Managing migration in the European welfare state", in T. Boeri, G. Hanson and B. McCormick (eds.), *Immigration Policy and the Welfare System* (Oxford, Oxford University Press, 2002); Eurostat, Labour Force Survey (Luxembourg), 1999.

[a] Without Greece, Italy, Portugal and Spain.

per cent, although there are considerable differences between individual host and source countries. The proportion of males is highest among migrants from Africa and Albania, and is lowest for those from the Philippines and Romania.[224]

3) *Migrants' average skill levels are below those of natives in countries with a relatively high-skilled population, and above those of natives in countries with a relatively less skilled population.* Although a good deal of uncertainty surrounds the data, the available evidence indicates that migrants' skills lag behind those of natives in the main EU receiving countries. Table 5.2.6 shows the proportion of

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[224] Ibid.

TABLE 5.2.6

Migrants and natives with low education levels, 1996
(Ratio of persons with low education to group total)

		Definition of natives and foreigners							
		By citizenship			By immigration status				
						Foreign born: years since immigration			
	Total population	Nationals	EU foreigners	Non-EU foreigners	Native born	All	0-9	10-20	20+
Netherlands	0.28	0.27	0.32	0.60	..	..	..	..	..
Austria	0.29	0.28	0.16	0.51	0.29	0.18	(0.13)	(0.08)	0.28
Germany	0.30	0.29	0.36	0.56	..	..	..	..	..
Denmark	0.31	0.31	0.28	0.66	0.30	0.44	0.55	0.37	0.37
Finland	0.33	0.33	0.23	0.24	0.33	0.30	0.44	(0.58)	(0.24)
France	0.41	0.31	0.65	0.69	0.39	0.52	0.44	0.52	0.54
United Kingdom	0.41	0.41	0.49	0.28	0.49	0.32	0.18	0.33	0.35
Belgium	0.41	0.41	..	0.48	0.39	0.39	0.22	0.45	0.43
Greece	0.50	0.50	0.25	0.37	0.51	(0.26)	(0.17)	(0.26)	(0.33)
Ireland	0.51	0.52	0.38	0.21	0.52	0.37	0.33	0.43	0.35
Luxembourg	0.55	0.51	0.62	0.42	0.52	0.59	0.49	0.46	0.72
Italy	0.60	0.60	0.30	(0.36)	0.59	(0.44)	(0.35)	(0.41)	(0.46)
Spain	0.62	0.62	0.29	(0.37)	0.62	(0.54)	(0.42)	(0.24)	(0.32)
Portugal	0.81	0.81	(0.23)	(0.50)	0.82	(0.44)	(0.47)	(0.50)	(0.49)

Source: European Community Household Survey Panel (ECHP).

Note: Figures in brackets are affected by low response rates.

individuals who report relatively low education levels in the European Community Household Survey Panel (ECHP).[225] The picture, however, differs greatly between individual receiving and source countries. In general, there appears to be a Heckscher-Ohlin pattern in migration, i.e. countries with a relatively high-skilled population receive relatively low-skilled migrants, and vice versa. In particular, the proportion of low-skilled immigrant workers is high in Austria, Denmark, France, Germany and the Netherlands. However, there are distinct differences which exist between migrants from different source regions: while the skills of other EU citizens are, with the exceptions of France and Luxembourg, similar to those of the native population, the average education levels of non-EU citizens lag substantially behind those of the native population. Moreover, the skill levels of migrants from the central and eastern European countries are similar to or even higher than those of natives in EU receiving countries. The southern EU members, i.e. Greece, Italy, Portugal and Spain, receive migrants with higher education levels than natives. While in some countries the education level of recent migrant cohorts has improved relative to those which arrived several decades ago (Austria, Belgium, France, United Kingdom), in other cases their level has deteriorated (Denmark) or remained unchanged (Luxembourg) (table 5.2.6).

4) *The occupational status of migrants is below that of natives with comparable skills.* In the main receiving countries of the EU and the EEA, more than 70 per cent of the migrant labour force are employed as manual workers in manufacturing and agriculture or as less skilled workers in the service sectors; the corresponding share of the native population is below 40 per cent. However, in the United Kingdom and in those countries where there has been a recent surge in migration from central and eastern Europe (e.g. Austria), the share of migrants in manual occupations is only slightly higher than that of natives. In some countries, there is a bimodal concentration of migrants at the upper and the lower ends of the skill spectrum. For example, the proportion of migrants in professional occupations in finance and other service sectors is extraordinarily high in Denmark and the United Kingdom. But foreigners are underrepresented in high-skilled occupations in most receiving countries.[226] The evidence from numerous studies based on micro data sets, however, indicates that the occupational status of migrants lags behind what it should be in relation to their skills.

5) *Unemployment and welfare dependency rates for migrants are higher than those for natives.* The high proportion of migrants in low-skill occupations is reflected in greater unemployment risks (table 5.2.7). While unemployment rates for other EU-citizens are similar to those of natives, those for non-EU citizens are between two and three times higher than those of natives in the main EU receiving countries (e.g. Belgium, France, Germany). The position of migrants,

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[225] The ECHP is a longitudinal survey, which has been carried out by Eurostat in the European Union since 1994. Education levels are reported using an international classification. Note that all the information on skill levels depends on self-classification, which tends to an upward bias. Moreover, low response rates affect the results for countries with a small foreign population.

[226] H. Brücker et al., "Managing migration ...", op. cit.

TABLE 5.2.7

Unemployment rates of nationals and non-nationals, 1996
(Per cent)

	Nationals	Non-nationals	
		EU	Non-EU
Austria	4.3	..	9.5
Belgium	7.6	13.3	35.7
Denmark	5.0	..	16.4
France	11.4	10.5	30.5
Germany	8.2	8.8	18.9
Netherlands	3.4	3.3	18.5
Sweden	7.2	..	28.4
United Kingdom	6.0	7.3	11.5

Source: As for table 5.2.5.

relative to natives, has deteriorated over time: for example, while the total unemployment rate in Belgium declined from 11 per cent to 8 per cent between 1983 and 1995, for the migrant labour force it increased from 22 to 23 per cent. There were similar trends in the other main receiving countries. Moreover, the available evidence indicates that the welfare dependency of foreigners has also increased: for example, the proportion of foreigners among welfare recipients in Germany increased from 8.3 per cent in 1980 to 23.5 per cent in 1996, while their share of the population only increased from 7.2 per cent to 8.9 per cent.[227] Although part of this increase is due to the increased numbers of both asylum seekers and humanitarian migrants, it also clearly reflects the poor labour market performance of migrants in many receiving countries.

Numerous studies based on micro data sets indicate that the higher unemployment and welfare dependency rates for migrants reflect their human capital characteristics. For a given level of skills and other human capital characteristics, non-natives actually depend to a lesser extent on welfare and unemployment benefits than do natives.[228]

5.3 The impact of migration on the European labour market

The large number of migrants in western Europe has raised increasing concerns that immigration will reduce the welfare of natives in host countries. These concerns focus primarily on the labour market implications of migration. Two fears dominate the debate: (i) that immigrants reduce the wages of natives, and (ii) that they take jobs away from natives. Most of the empirical research that has been done addresses these questions. The impact of migration on the welfare of natives in the receiving countries is, however, only a part of the story. Migration also affects the welfare of natives in the source countries, and, more importantly, the welfare of migrants themselves. A comprehensive analysis of the effects of international migration on the European labour market should therefore consider these two aspects as well.

In this section, the effects of migration on labour markets are analysed from different perspectives. It begins with a brief review of the standard model and the presentation of the assumptions, which form the basis for the simulations of the various effects (section 5.3(i)).[229] The impact of migration is then calibrated under the assumption that labour markets clear; this creates a point of reference (section 5.3(ii)). Next is considered the case where labour markets are characterized by persistent unemployment (section 5.3(iii)), and this is followed by an assessment of the influence of unemployment benefit on the structure of migration and its implications for GDP and income distribution (section 5.3(iv)). European countries are characterized by large regional differences in wage and unemployment rates and, as migrants tend to move to the more prosperous regions, this has implications for the welfare gains from international migration, which are examined in section 5.3(v). The standard model for assessing the impact of migration on aggregate output and income distribution refers essentially to an economy that is otherwise closed and, hence, labour markets bear the whole brunt of adjustment. The picture changes in the case of an open economy and aspects of this alternative model are explored in section 5.3(vi). In the final section of this chapter the empirical literature is reviewed to see whether it is consistent with the results reported here (section 5.3(vii)).

(i) The standard model of labour migration

Public concerns about labour migration are usually implicitly focused on the most simple case of an isolated economy, where only one good is produced and the labour supply of natives is inelastic. In this case, the labour market bears the whole brunt of adjustment. Assume that the good is produced with capital, skilled and unskilled labour, and that the production technology has constant returns to scale. Capital and both types of labour are complements, while high-skilled labour and manual workers are imperfect substitutes. An additional supply of low-skilled labour will then reduce the wages of low-skilled labour, raise the income of capital and expand production. The impact of migration on high-skilled labour is ambiguous: the fall in wages for low-skilled workers may lead to the substitution of high-skilled workers by less skilled ones, while the scale effect increases the demand for high-skilled labour. The total effect on the income of natives in the receiving country is positive. The converse holds for the source country: wages for low-skilled labour increase, income from capital falls and the total effect on the income of those left behind is negative. Thus, in the absence of transfers, income inequality increases in the host countries and decreases in the source countries.

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[227] R. Riphahn, "Immigrant participation in the German welfare program", *FinanzArchiv*, Vol. 55, 1999, pp. 163-185.

[228] R. Riphahn, op. cit.; J. Frick, F. Büchel and W. Voges, "Sozialhilfe als Integrationshilfe für Zuwanderer in Deutschland", DIW, *Wochenbericht*, Vol. 63, No. 48, 1996, pp. 767-775; M. Fertig and C. Schmidt, *First- and Second-Generation Migrants in Germany – What Do We Know and What Do People Think*, IZA Discussion Papers, No. 286 (Bonn), April 2001; J. Hansen and M. Lofstrom, *Immigration Assimilation and Welfare Participation: Do Immigrants Assimilate Into or Out of Welfare?*, IZA Discussion Papers, No. 100 (Bonn), December 1999; P. Pedersen, *Immigration in a High Unemployment Economy: The Recent Danish Experience*, IZA Discussion Papers, No. 165 (Bonn), June 2000.

[229] The technical details are presented in an annex to this paper.

The result that immigration increases the aggregate income of natives relies on the assumption that labour markets clear. This changes if there is unemployment. Assume that wages for manual workers are fixed above equilibrium levels by a bargaining monopoly of unions and employer federations and that wages for high-skilled workers are flexible. As a result, part of the unskilled labour force will be unemployed and the wages of skilled labour will fall below equilibrium levels. The impact of migration then depends on the collective wage setting: in the most extreme case, wages do not respond to unemployment at all, in which case the immigration of unskilled workers simply increases the aggregate unemployment of unskilled workers and the aggregate welfare of natives falls. If wages adjust partially to the additional labour supply, the effect on national income is ambiguous: production expands, the rate of return on capital increases and the wages of unskilled workers fall. The net effect (a rise or a fall) on employment depends on the scale of the wage response and the parameters of the model.

The quantitative implications of the one-good model can be illustrated by a simple simulation exercise. The technical annex describes a stylized model of a one-good economy, which draws on similar models by Levine[230] and Bauer and Zimmermann,[231] although this study includes several additional features. The economy's output is produced with skilled labour, unskilled labour and physical capital. Due to a lack of data I use the shares of manual and non-manual workers in the labour force as proxies for unskilled and skilled labour, although these are only a very rough approximation of the actual proportions of skilled and unskilled labour. Production technologies are approximated by a Cobb-Douglas function; the share of manual workers in total income is estimated in the host countries at 26 per cent, that of non-manual workers at 45 per cent and that of capital at 29 per cent. These are estimates of actual factor shares in the EU.[232] The proportion of manual workers in the host countries' labour force is estimated to be 40 per cent.

In the source countries, the proportion of manual workers is assumed to be 70 per cent, substantially higher than in the host countries, and the factor shares in income are assumed to be 40 per cent for manual workers, 31 per cent for non-manual workers and 29 per cent for capital. Total factor productivity and physical capital availability in the source countries are half of those in the host countries. Finally, it is assumed that the labour forces (manual and non-manual workers) in the host and the home country are the same size in their pre-migration state.

Under these assumptions, GDP per capita in the countries of origin is almost 40 per cent of that in the host countries in the pre-migration state; the wages of manual workers are 34 per cent, and those of non-manual workers 54 per cent of those in the host countries. These proportions correspond roughly to those prevailing between the EU and the accession candidates in central and eastern Europe at present, and to the north-south income gap in Europe during the 1960s.

For convenience, the domestic labour supply is treated as inelastic, and the physical and human capital endowments of natives and migrants are taken as fixed. This means that the simulation concerns short-term adjustment. In the long run, the economy will adjust to migration by the accumulating physical and human capital, such that the impact of migration on relative wages and employment is expected to be smaller.

(ii) The impact of migration in a full-employment economy

Following Borjas[233] and Bauer and Zimmermann,[234] perfectly flexible labour markets are used as a point of reference. Consequently, unemployment in both economies is zero and all migrants are immediately absorbed by the host labour markets. Given the assumptions made about technology and factor proportions, the factor price elasticity for manual workers in the host country is -0.74, and for non-manual workers -0.55, i.e. the wages of manual workers fall by 0.74 per cent if their number increases by 1 per cent, and the wages of non-manual workers fall by 0.55 per cent if their number increases by 1 per cent. In the source country, the factor price elasticity of manual labour is -0.6, and that of non-manual labour -0.69, respectively. The elasticity of the wage rate for manual labour with respect to a change in the number of non-manual workers is 0.45, and the elasticity of wages for non-manual workers with respect to a change in the number of manual workers is 0.26.

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[230] P. Levine, "The welfare economics of migration control", *Population Economics*, Vol. 12, 1999, pp. 23-43.

[231] T. Bauer and K. Zimmermann, op. cit.

[232] Ibid.

[233] G. Borjas, "The economic benefits from immigration", *Journal of Economic Perspectives*, Vol. 9, 1995, pp. 3-22.

[234] T. Bauer and K. Zimmermann, op. cit.

TABLE 5.3.1

The impact of migration on GDP and income distribution in an economy with full employment
(Percentage change at immigration (emigration) of 1 per cent of the labour force)

		Share of manual workers in the migrant population				
		1	*0.7*	*0.5*	*0.3*	*0*
Total GDP	Host country	0.64	0.68	0.70	0.72	0.75
	Source country	-0.57	-0.71	-0.80	-0.90	-1.05
	Total region	0.30	0.29	0.28	0.26	0.240
Total income of natives	Host country	0.006	0.002	0.001	0.001	0.003
	Source country	-0.003	-0.001	-0.002	-0.005	-0.013
	Total region	0.004	0.001	–	-0.001	-0.001
Total income of migrants		186.48	144.07	123.05	105.72	84.48
Wage manual workers	Host country	-1.81	-1.05	-0.54	-0.03	0.75
	Source country	0.87	0.29	-0.09	-0.47	-1.05
	Total region	0.19	0.16	0.14	0.11	0.07
Wage non-manual workers	Host country	0.64	0.18	-0.13	-0.44	-0.90
	Source country	-0.57	0.29	0.88	1.47	2.37
	Total region	0.39	0.38	0.38	0.38	0.37
Real interest rate	Host country	0.64	0.68	0.70	0.72	0.75
	Source country	-0.57	-0.71	-0.80	-0.90	-1.05
	Total region	0.30	0.29	0.28	0.260	0.24

Source: Author's calculations.

Note: See text and technical annex for the assumptions of the simulation model.

Thus, the impact of migration depends essentially on the migrants' human capital characteristics. Table 5.3.1 displays the impact of 1 per cent of the workforce immigrating (emigrating). As expected, total domestic income increases in the host region, while in the country of origin it falls. Interestingly enough, the benefits of migration are highest for the natives in the host countries at the extreme ends of the skill spectrum, i.e. if immigrants are only manual workers or only non-manual workers. The greater the complementarities of the skills of migrants to those of natives, the larger are the gains. The aggregate impact of migration on native income, however, is negligible, with a maximum gain of 0.006 per cent. Nevertheless, given the EU's GDP of €7.6 trillion in 1998, an increase in the labour force of 1 per cent through the immigration of manual workers would still have provided a gain of €460 million. The gains from migration become even more important when its impact on all participants is considered: the total gain in income for the host countries, the source countries and the migrants amounts to between 0.24 and 0.3 per cent of the region's GDP, which with a total GDP of €10 trillion is equivalent to between €24 billion and €30 billion. Most of these gains accrue to the migrants. Moreover, migration has important implications for the income distribution among natives: capital gains, substantially, in the host country and loses, also substantially, in the country of origin, while the impact on wages depends on the migrants' skills. In the extreme case where all migrants are manual workers, their wage falls by almost 1.8 per cent, while that for skilled labour increases by almost 0.7 per cent. In the source countries, the wages of manual workers increase by almost 0.9 per cent, and those of non-manual workers fall by about 0.6 per cent if all emigrants are manual workers. Thus, whether migration increases or reduces the inequality of incomes is a matter of perspective: from the perspective of the source country, the income of labour increases, while that of capital declines; the converse holds for the host countries. In the region as a whole, income disparities tend to decline.

(iii) The impact of migration in an economy with persistent unemployment

In an economy with wage rigidities and persistent unemployment, the implications of a change in migration are as follows. Consider the following stylized model for wage setting:[235] at the beginning of each period, wage rates are determined by a bilateral bargaining monopoly of trade unions and employer federations. In the second stage, firms hire manual and non-manual workers until their marginal product equals the negotiated wage rate; the participants in the wage negotiations are aware of this. Collective wage setting responds to an increase in unemployment, but does so imperfectly. As a consequence, a part of the labour force remains unemployed and not all migrants are absorbed by the host labour markets. According to the classical approach of Harris and Todaro,[236] in each period jobs are allocated among members of the workforce – natives and migrants - using a random draw. The employment opportunities of migrants are, however, assumed to be less than those of natives. This implies that a part of the unemployment risk is shifted from natives to migrants. The unemployed receive an unemployment benefit, which is a uniform proportion of the post-tax wage, and which is financed by a uniform tax rate on all labour incomes. Taxes are set so that they just equal the unemployment benefit; all other taxes and public debts are ignored.

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[235] P. Levine, op. cit.

[236] J. Harris and M. Todaro, "Migration, unemployment and development, a two-sector analysis", *American Economic Review*, Vol. 60, 1970, pp. 126-142.

Thus, within this framework, migration can affect the income of natives and migrants in three ways: through changes in (i) the (negotiated) wage rate, (ii) employment opportunities, and (iii) the tax rate. Throughout this section, it is assumed that the risk of unemployment for a migrant, for a given skill level, is twice as high as for a native in the host country, and that the share of unemployment benefits in post-tax wages (the replacement ratio) is 0.3. The former assumption corresponds to the relationship between unemployment rates for migrants and those for natives in the EU and the latter is a reasonable approximation for west European countries.[237] The implications of variations in the generosity of unemployment benefits are analysed in the next section.

In order to evaluate the impact of migration in an environment with unemployment, different degrees of flexibility for wage setting are considered in the calibrations. Table 5.3.2 reports the impact of a 1 per cent increase in the labour force through migration on GDP, on the income of the various production factors, on the nominal wage rate, on the post-tax wage rate and on the unemployment rate. First consider the extreme case where wages for manual labour do not respond at all to the unemployment rate, while those for non-manual labour are perfectly elastic. These restrictive assumptions are relaxed later. The average unemployment rate is assumed to be 10 per cent in both the host and the home country. Since wages for skilled labour are flexible, the unemployment of non-manual workers is zero. Given the shares of manual and non-manual workers in the total labour force, the unemployment rate for manual labour is 25 per cent in the host country, and 14.3 per cent in the source country.

In the third column of table 5.3.2, it is assumed that the share of manual workers in the migrant population is 70 per cent; in the fourth column that 70 per cent of migrants are non-manual workers. In the first case, if 1 per cent of the labour force emigrates, the unemployment rate in the host countries increases by 0.5 percentage points, although the migrants themselves bear a large part of this burden. The income of natives in the host country falls by almost 0.3 per cent, while that of natives in the source countries increases. The nominal wage rate for manual workers remains constant and the unemployment rate for non-manual workers remains zero. The unemployment rate for manual workers increases by 1.1 percentage points and nominal wages for non-manual workers decline by 0.2 per cent. Due to higher unemployment, post-tax wages decline for manual workers by 0.2 per cent and for non-manual workers by 0.4 per cent. Although total unemployment increases, migration still yields a net increase in total GDP for the region of 0.07 per cent. This is a substantial reduction vis-à-vis the reference case of flexible labour markets, where the net gain in GDP amounted to almost 0.3 per cent.

The picture completely changes if we consider the immigration of skilled migrants. The increase in the supply of skilled labour creates additional jobs for manual workers: unemployment falls in the host country, while the converse holds for the source country. The unemployment rate in the region still increases under these assumptions. The income of natives increases in the host country, and falls in the source country. Thus, the adverse impact of a "brain drain" may be even more severe in the source countries, if their unskilled workers are more than proportionally affected by unemployment. However, given the assumptions made as to the wage response to unemployment, the gains from migration in the region as a whole increase unambiguously as the proportion of skilled workers among the migrant population rises (technical annex table). Thus, the losses in the source country from the emigration of skilled workers are offset by the gains of the host country. The net gain in the GDP for the total region increases to 0.17 per cent, which is substantial, but still below the gain in the case of flexible labour markets.

In the last three columns of table 5.3.2, more realistic assumptions are made about the wage response to unemployment. Several studies have found that the elasticity of the wage rate with respect to the unemployment rate varies in Europe between 0.4 and 1.1.[238] In the simulations, it is assumed that wages for non-manual workers are more flexible than those for manual workers. Consequently, unemployment is higher for manual workers than for non-manual workers. More specifically, is it assumed that the unemployment rates for manual workers are 15 per cent in the host country and 12 per cent in the source country, while the unemployment rates for non-manual workers are 6.6 per cent and 5.2 per cent, respectively. The total unemployment rate is still assumed to be 10 per cent in both, and the share of manual workers in the migrant population to be 70 per cent.

Given these assumptions, the unemployment rate in the host countries increases between 0.2 and 0.4 per cent and falls in the source country, while the unemployment rate for the total region remains almost constant. The

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[237] R. Layard, S. Nickell and R. Jackman, *Unemployment: Macroeconomic Performance and the Labour Market* (Oxford, Oxford University Press, 1991).

[238] P. Levine, op. cit. Levine refers to different studies, *inter alia*, C. Bean, R. Layard and S. Nickell, "The rise in unemployment: a multi-country setting", *Economica*, Vol. 53, 1986, pp. S1-S22; A. Newell and J. Symons, *Wages and Employment in the OECD Countries*, London School of Economics, Centre for Labour Economics, Discussion Paper No. 219 (London), 1985; R. Layard, S. Nickell and R. Jackson, op. cit.

TABLE 5.3.2

The impact of migration in an economy with unemployment

Semi-elasticity of wage with respect to unemployment rate						
Manual wages		0.0	0.0	-0.4	-1.0	-1.5
Non-manual wages		-∞	-∞	-1.0	-1.5	-3.0
Share of manual workers in migrant population		0.7	0.3	0.7	0.7	0.7
	Percentage change at an immigration (emigration) of 1 per cent of the labour force					
Total GDP	Host country	0.30	0.71	0.39	0.50	0.55
	Source country	-0.52	-1.21	-0.47	-0.56	-0.61
	Total region	0.07	0.17	0.15	0.20	0.22
Total income of natives	Host country	-0.28	0.04	-0.22	-0.11	-0.07
	Source country	0.21	-0.36	0.26	0.16	0.10
	Total region	-0.15	-0.07	-0.09	-0.04	-0.02
of which:						
Manual workers	Host country	-0.72	0.13	-0.92	-0.87	-0.86
	Source country	0.42	-0.67	0.52	0.43	0.38
	Total region	-0.31	-0.17	-0.40	-0.40	-0.41
Non-manual workers	Host country	-0.40	-0.46	-0.21	-0.04	0.02
	Source country	0.58	1.00	0.56	0.45	0.40
	Total region	-0.19	-0.16	-0.05	0.05	0.09
Capital owners	Host country	0.30	0.71	0.39	0.50	0.55
	Source country	-0.52	-1.21	-0.47	-0.56	-0.61
	Total region	0.07	0.17	0.15	0.20	0.22
Total income of migrants		109.35	92.21	120.09	120.74	120.98
Post-tax wage rate						
Manual workers	Host country	-0.20	-0.01	-0.48	-0.65	-0.73
	Source country	0.09	-0.16	0.25	0.28	0.27
	Total region	0.15	0.49	0.15	0.19	0.19
Non-manual workers	Host country	-0.40	-0.46	-0.19	-0.08	-0.03
	Source country	0.58	1.00	0.37	0.33	0.33
	Total region	0.15	0.49	0.15	0.19	0.19
	Change of unemployment rate in percentage points					
Total unemployment rate	Host country	0.50	-0.01	0.40	0.25	0.20
	Source country	-0.29	0.53	-0.32	-0.20	-0.13
	Total region	0.11	0.26	0.04	0.03	0.03
Manual workers	Host country	1.07	0.03	0.85	0.56	0.44
	Source country	-0.41	0.67	-0.35	-0.21	-0.15
	Total region	0.20	0.46	0.11	0.10	0.09
Non-manual workers	Host country	–	–	0.05	–	-0.01
	Source country	–	–	-0.26	-0.17	-0.10
	Total region	–	–	-0.05	-0.05	-0.03

Source: Author's calculations.

Note: See text and technical annex for the assumptions of the simulation model.

impact on the total income of natives in the host countries is still negative, and the main burden of adjustment is still borne by manual workers. However, the gain in total GDP, at between 0.15 and 0.22 per cent of aggregate GDP, is still substantial (table 5.3.2).

(iv) Do unemployment benefits reduce welfare?

Welfare benefits can affect the gains and losses from migration in two ways: (i) directly, by redistributing income between natives and migrants, and, (ii) indirectly, by affecting the size and composition of the migrant population with regard to their human capital characteristics. The last point in particular attracted increasing attention in the theoretical and empirical discussions in the second half of the 1990s. Based on the Roy model,[239] it is argued that, *ceteris paribus*, the "quality" of the migrant population with respect to their human capital and other abilities relevant to their labour market performance increases, if inequality in the distribution of income in the host country rises relative to that in the source country, and vice versa.[240] Thus, increasing the redistribution of income through welfare benefits reduces, *ceteris paribus*, the skill level and ability of the migrant population. Moreover, the scale of migration increases above the "optimal" level if the incentives to migrate are distorted by welfare benefits.[241] However, the propositions of the Roy model rely on a set of restrictive assumptions about the structure of migration costs, and the pecuniary and human abilities of high-skilled individuals or households to move relative to the less skilled. Other assumptions may yield different conclusions.[242] The available empirical evidence for the Roy model is weak, since there are no comparable data on the skill structure of the host and the home country populations and that of the migrants.

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[239] A. Roy, "Some thoughts on the distribution of earnings", *Oxford Economic Papers*, Vol. 3, 1951, pp. 135-146.

[240] G. Borjas, "Self-selection and the earnings of immigrants", *American Economic Review*, Vol. 77, 1987, pp. 531-553.

Using our simple simulation model, the impact of welfare benefits is analysed in two steps. First, the impact on the distribution of income for a given rate of migrations is examined; and, second, the analysis explores how the migration rate responds to a change in unemployment benefits. Following Harris and Todaro,[243] it is assumed that jobs are allocated by a random draw among members of the workforce in each period. Thus, the impact of welfare benefits on the migration propensity of individuals who face a high risk of long-term unemployment due to certain personal characteristics is ignored. Second, the analysis is limited to the impact of unemployment benefits, and other important aspects, such as the intertemporal redistribution of income between generations, is also ignored. Third, the unemployment rate is taken as given, i.e. the impact of unemployment benefits on wage bargaining and the labour market participation of individuals is ignored. Thus only a part of the problem is captured by the model used here.

The impact of variations in the ratio of unemployment benefits to post-tax wages is reported in table 5.3.3. Given the model's assumptions, the size of unemployment benefits does not affect total GDP or the unemployment rate in the host country. It does, however, affect the distribution of income between natives and migrants: given that 70 per cent of migrants are manual workers, and are therefore more than proportionally affected by unemployment, and that, for a given skill level migrants are affected by unemployment twice as much as natives, the income gain of migrants increases by more than one third if the benefit amounts to 60 per cent of the post-tax-wage (relative to the reference case where there are no unemployment benefits). The actual ratio of benefit to post-tax wages in Europe lies in a range between 0.2 and 0.4, which implies an increase in the potential income gain of migrants of between 17 and 33 percentage points relative to the reference case. The impact on the total income of natives, however, is a moderate increase of between 0.05 and 0.09 per cent of GDP.

TABLE 5.3.3

The impact of unemployment benefits on income in host countries, 2000

(Percentage change at an immigration (emigration) of 1 per cent of the labour force)

	Unemployment benefits in per cent of post-tax wages			
	0	*20*	*40*	*60*
Total income of natives	-0.03	-0.08	-0.12	-0.17
of which:				
Manual workers	-0.65	-0.69	-0.73	-0.77
Non-manual workers	-0.01	-0.08	-0.14	-0.21
Total income of migrants	85.51	102.40	118.49	133.82
Post-tax wage rate				
Manual workers	-0.53	-0.60	-0.67	-0.73
Non-manual workers	-0.01	-0.08	-0.14	-0.20

Source: Author's calculations.

Note: The simulation is, *inter alia*, based on the following assumptions: (i) the total unemployment rate is 0.1; (ii) the unemployment rate of migrants is, for a given skill, twice as high as that of natives; (iii) the unemployment rate of manual workers is 0.15, the unemployment rate of non-manual workers is 0.066; (iv) the semi-elasticity of manual wages with respect to the unemployment rate is -1.0; (v) the semi-elasticity of non-manual wages is -1.5; (vi) the share of manual workers in the migrant population is 0.7. See text and technical annex for further assumptions.

These back-of-the envelope calculations ignore the impact of unemployment benefits on the number and the skill structure of migrants. Consider the following stylized model of international migration: migration is permanent and the potential migrant compares the net present value of future utility streams that will be realized from expected income in the foreign country with those in the home country. Expected income is calculated as the probability of employment times the wage rate plus the probability of unemployment times the unemployment benefit in the respective country.[244] If the skills of the migrant remain constant, i.e. skilled (unskilled) workers expect to remain skilled (unskilled) in the foreign country, and the potential migrant is risk-neutral, he/she will migrate if the net present value of utility streams from expected income exceeds the costs of migration, which include all social and other non-pecuniary costs from living in an unfamiliar environment. The costs of migration differ between individuals, such that they tend to increase alongside the proportion of the population that already lives abroad. In equilibrium, the costs of migration will equal the net difference in expected income between the host and the home country for the marginal migrant. Thus, the share of migrants in the population of the home country is a function of the income differential.[245]

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[241] H.-W. Sinn et al., op. cit.

[242] B. Chiswick, *Are Immigrants Favorably Self-Selected? An Economic Analysis*, IZA Discussion Papers, No. 131 (Bonn), March 2000.

[243] J. Harris and M. Todaro, op. cit.

[244] Ibid.

[245] It is assumed that this function is concave, and more specifically, that the share of migrants in the population of the home country is a semi-logarithmic function of the expected difference in income. Empirical evidence shows that the propensity to migrate is greater for skilled workers than for unskilled workers for a given difference in income. Thus, the elasticity of potential migration differs for skilled and unskilled workers.

TABLE 5.3.4

The impact of unemployment benefits on potential migration and income

(Per cent)

	Share of unemployment benefit in post-tax wage income			
	0	*20*	*40*	*60*
Ratio of post-tax wages				
Manual workers	3.00	2.99	2.99	2.98
Non-manual workers	1.88	1.88	1.88	1.88
Ratio of expected income				
Manual workers	2.39	2.52	2.64	2.76
Non-manual workers	1.72	1.73	1.73	1.74
Migration scenario I [a]				
Total migration as a per cent of population	3.87	4.06	4.23	4.38
Share of manual workers	0.79	0.80	0.81	0.81
Percentage increase (decrease)				
Total GDP: Host country	1.87	1.96	2.03	2.11
Source country	-1.99	-2.07	-2.13	-2.21
Total region	0.79	0.82	0.86	0.89
Income of natives host country	-0.28	-0.42	-0.56	-0.70
Manual workers	-4.25	-4.39	-4.50	-4.52
Non-manual workers	0.61	0.45	0.28	0.05
Capital owners	1.87	1.96	2.03	2.11
Income of migrants	113.28	124.75	136.01	145.88
Migration scenario II [b]				
Total migration as a per cent of population	4.68	4.88	5.05	5.21
Share of manual workers	0.65	0.66	0.67	0.68
Percentage increase (decrease)				
Total GDP: Host country	2.41	2.50	2.58	2.65
Source country	-2.75	-2.84	-2.92	-2.98
Total region	0.96	1.00	1.03	1.06
Income of natives host country	-0.33	-0.46	-0.60	-0.75
Manual workers	-3.73	-3.92	-4.09	-4.24
Non-manual workers	-0.12	-0.33	-0.54	-0.76
Capital owners	2.41	2.50	2.58	2.65
Income of migrants	103.63	113.11	122.48	131.72

Source: Author's calculations.

Note: The simulation is, *inter alia,* based on the following assumptions: (i) the total unemployment rate is 0.1; (ii) the unemployment rate of migrants is, for a given skill, twice as high as that of natives; (iii) the unemployment rate of manual workers is 0.15, the unemployment rate of non-manual workers is 0.066; (iv) the semi-elasticity of manual wages with respect to the unemployment rate is -1.0; (v) the semi-elasticity of non-manual wages is -1.5. See text and technical annex for further assumptions.

[a] The semi-elasticity of the migration share with respect to expected income is 0.05.

[b] The semi-elasticity of migration with respect to expected income is 0.05 for manual workers, and 0.1 for non-manual workers.

This stylized model ignores other factors which affect migration decisions such as liquidity constraints, risk aversion and uncertainty. However, it is sufficient for illustrative purposes. Table 5.3.4 shows the impact of unemployment benefits on the scale of migration and its skill structure. Given the assumptions, the gap in post-tax wages is higher for manual workers than it is for non-manual workers and the ratio of expected income in the host country to expected income in the source country increases with the generosity of unemployment benefits. The size of the unemployment benefit has a greater impact on manual workers, since they are more affected by unemployment than non-manual workers. We consider two migration scenarios: in the first, a uniform semi-elasticity is assumed between the share of migrants in the population and the ratio of expected income for both manual and non-manual workers; in the second, the semi-elasticity is twice as high for non-manual workers than it is for manual workers. These elasticities are roughly in line with those estimated in macro models of international migration.[246]

Given these assumptions, an increase in unemployment benefits does indeed lead to (i) an increasing number of migrants, and (ii) an increase in manual relative to non-manual workers. However, the impact of unemployment on the scale and structure of migration is fairly modest: an unemployment benefit of 60 per cent of the post-tax wage increases the share of migrants in the home population by 0.5 percentage points in both scenarios, compared with the situation where there are no unemployment benefits, and the share of manual workers in the migrant population increases by between 2 and 3 percentage points. These results are robust for a wide range of assumptions. Note that the average share of unemployment benefits in post-tax wages reaches around 30 per cent in western Europe and that the assumption of zero unemployment benefits in the source countries is an exaggeration. Thus, even on the assumptions of the Roy model, the impact of unemployment benefits on the size and composition of the migrant population seems to be rather small.

Finally, what is the impact of unemployment benefit on the total income of natives and migrants? Given the assumptions for both scenarios, a benefit of 60 per cent of post-tax wages reduces the income of natives by around 0.4 per cent, while increasing that of migrants by around 30 percentage points, relative to the situation of zero benefits. Interestingly enough, total GDP of both countries increases by 0.1 per cent, essentially because higher unemployment benefits encourage more migrants to move to where their skills are more efficiently used. However, this result relies heavily on the arbitrary assumption that unemployment benefits do not affect the unemployment rate and do not motivate less skilled individuals to move.

(v) Can international migration grease the wheels of the labour market?

Regional labour mobility is one, and probably the most important, way of absorbing economic shocks. An influential paper by Blanchard and Katz provides evidence that labour mobility has been the main factor in reducing differences in wages and unemployment rates across United States regions in the wake of regional demand shocks.[247] Regional labour mobility is, however, much lower in Europe than in the United States: the elasticity of migration in the EU with respect to regional wage differentials has been estimated at around one third of the United States level.[248]

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[246] T. Boeri, H. Brücker et al., op. cit.; H. Brücker, "Die Folgen der Freizügigkeit ...", op. cit.; T. Straubhaar, "Ost-West Migrationspotenzial: Wie groß ist es?", *Jahrbücher für Nationalökonomie und Statistik*, Vol. 222, 2002, pp. 20-41

Recently, Borjas made the point that international migration may "grease the wheels of the labour market" in host countries by reducing regional wage differentials, especially if domestic labour mobility is low.[249] Consider the following case: the host country consists of two regions, one low wage, the other high wage. Domestic migration is already in equilibrium, i.e. the costs of moving from the low-wage to the high-wage region equal the net difference in the utility from expected income for the marginal native migrant. Now consider the impact of international migration. The difference between the wage in the high-income region of the host country and the wage of the foreign country is higher than the wage difference between the high and the low-income regions in the host country. Thus, the incentive to migrate is higher for foreign workers than for natives. International migrants will move to the high-wage region, since expected incomes are higher there. Hence, international migration reduces the regional wage differential in the host country. This increases the productivity of the remaining factors of production, and GDP in the host countries is higher than it would be if there were no regional wage differences.

It is straightforward to extend this reasoning to the case of regional differences in unemployment rates: although its average unemployment rates may be high, there may still be a shortage of labour in the high-income region of the host country. Thus, the international migration may not affect the average unemployment rate in the host country (and may even reduce it), while total GDP and income of the domestic production factors will increase.

Calibrating the implications of regional wage and employment differences is straightforward. It is assumed that the host country consists of two regions, that the proportion of manual and non-manual labour is the same in each region, and that factor income shares are the same as in the baseline model. Total factor productivity and the physical capital stock are 20 per cent above the country average in the high-income region, and 20 per cent below in the low-income region. This implies that in the case of full-employment, wages for manual and non-manual labour are, respectively, 26 per cent above the average in the high-income region, and 26 per cent below in the low-income region. Note that regional income differences on this scale are not uncommon in the European economies. The average differences in GDP and wages between the host country and the source country are the same as in the baseline model. It is also assumed that all the migrants move to the high-income region, and that 70 per cent of them are manual workers.

Given these assumptions, the gains from international migration increase substantially relative to the reference case where there are no required differences. In table 5.3.5, we consider three different scenarios. In the first, labour markets clear in both regions of the host country and the source country. The third column of table 5.3.5 shows the impact of migration when a regional wage difference exists, the fourth when there is no difference. Relative to the reference case, the gain in total GDP from migration increases from 0.29 to 0.41 per cent, and the natives in the host country gain from 0.002 per cent to 0.005 per cent.

In the second scenario, labour markets clear in the high-wage region, but where substantial unemployment exists in the low-wage region. The minimum wage agreed in collective bargaining is only relevant in the low-income region, i.e. wages in the high-income region are elastic. In this scenario, the gains from migration even exceed those of the case where labour markets clear.

In the third scenario, it is assumed that both regions are affected by unemployment, but that a substantial difference between the two regions in unemployment rates and the wage elasticity exists, perhaps a more realistic situation than the first two examples. The gains from migration are still above those in the reference case with equal wage and unemployment rates, but smaller than those in the case where labour markets clear in the high-wage region.

Altogether, the gains from international migration increase substantially in the presence of regional wage and unemployment differences, a case which is empirically relevant. International migration tends to concentrate in urban centres, where wages are well above, and unemployment rates well below, the national average of host countries. Moreover, there is at least anecdotal evidence showing that emigration in the source countries is concentrated in low-income regions. Thus, migration may also reduce regional wage and income differentials in the source countries.

(vi) Can trade mitigate the impact of migration?

The taxonomic calculations of the previous sections indicate that the impact of migration on GDP and income distribution in both the sending and the receiving countries and regions can be substantial. These calculations essentially assumed that the host economy

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[247] O. Blanchard and L. Katz, "Regional evolutions", *Brookings Papers on Economic Activity*, 1 (Washington, D.C.), 1992, pp. 1-61.

[248] R. Barro and X. Sala-i-Martin, *Economic Growth* (New York, McGraw-Hill, 1995).

[249] G. Borjas, "Does immigration grease the wheels of the labor market", *Brookings Papers on Economic Activity*, 1 (Washington, D.C.), 2001, pp. 69-133.

TABLE 5.3.5

The impact of migration with regional wage and unemployment differences

Regional differences in wages and unemployment rates		Clearing labour markets [a]		Clearing labour markets in the high-wage region [b]		Higher wage flexibility in the high-wage region [c]	
		Heterogeneous regions	Homogenous regions	Heterogeneous regions	Homogenous regions	Heterogeneous regions	Homogenous regions
		Increase (decrease) in per cent					
Total GDP	Host country	0.85	0.68	0.90	0.50	0.72	0.48
	Source country	-0.71	-0.71	-0.43	-0.43	-0.53	-0.53
	Total region	0.41	0.29	0.53	0.24	0.37	0.19
Total income of natives	Host country	0.005	0.002	0.01	-0.11	-0.11	-0.14
	Source country	–	–	0.30	0.30	0.19	0.19
	Total region	–	–	0.08	–	-0.03	-0.05
of which:							
Manual workers	Host country	-1.30	-1.05	-1.36	-0.87	-1.23	-0.88
	Source country	0.29	0.29	0.57	0.57	0.46	0.46
	Total region	-0.74	-0.57	-0.68	-0.35	-0.62	-0.40
Non-manual workers	Host country	0.22	0.18	0.24	-0.04	0.03	-0.08
	Source country	0.29	0.29	0.59	0.59	0.48	0.48
	Total region	0.24	0.20	0.31	0.08	0.11	0.03
Capital owners	Host country	0.85	0.68	0.90	0.50	0.72	0.48
	Source country	-0.71	-0.71	-0.43	-0.43	-0.53	-0.53
	Total region	0.41	0.29	0.53	0.24	0.37	0.19
Total income of migrants		206.84	144.07	228.41	122.45	201.89	122.30
		Change of unemployment rate (percentage points)					
Total unemployment rate	Host country	..	..	-0.10	0.25	0.13	0.29
	Source country	..	..	-0.37	-0.37	-0.23	-0.23
	Total region	..	..	-0.23	-0.05	-0.05	0.03
Manual workers	Host country	..	..	-0.22	0.56	0.33	0.64
	Source country	..	..	-0.37	-0.37	-0.24	-0.24
	Total region	..	..	-0.31	-0.01	-0.02	0.10
Non-manual workers	Host country	..	..	-0.04	–	-0.03	0.01
	Source country	..	..	-0.35	-0.35	-0.21	-0.21
	Total region	..	..	-0.13	-0.11	-0.08	-0.06

Source: Author's calculations.

Note: In the case of heterogeneous regions, GDP and wages for manual and non-manual workers in the high-income region of the host country are 26 per cent above the country average, and in the low-income region 26 per cent below the country average. The labour force of the high-income and of the low-income regions of the host country are the same size. In the case of heterogeneous regions all migrants move into the high-wage region. For the source country and the reference case the assumptions of the baseline scenario apply.

[a] Clearing labour markets in host and source country.

[b] Clearing labour markets in the high-income region, elasticity of wages with respect to unemployment of 0.4 for manual workers and 0.1 for non-manual workers in the low-income region and source country, of 0.8 and 1.5 in the reference case of homogenous regions.

[c] Elasticity of wages with respect to unemployment for manual workers of 1.5 and 2.5 for non-manual workers in the high-income region, of 0.6 for manual workers and of 0.8 for non-manual workers in the low-income region and source country, of 1 and 1.5 for manual and non-manual workers, respectively, in the reference case of homogenous regions.

was closed, so that the labour market bore the whole brunt of adjustment.

Immigration, however, does not necessarily affect wages and employment in the case of an open economy. In the standard Heckscher-Ohlin-Samuelson (HOS) model, factor prices depend on the prices of traded goods, not on factor endowments. An influx of manual workers is completely absorbed by an increase in the export of labour intensive goods, by a fall in the export of capital or human capital intensive goods and by a shift in the output-mix (the Rybczynski-effect). Thus, in the model, migration does not affect wages, the distribution of income or GDP per capita in either the host or the source country.

If the standard assumptions of the HOS model are relaxed, the picture may change: differences in the level of technology, the specialization of countries in different technologies, immobility of factors between sectors, and sectors which produce non-tradable goods can mean that trade may even complement migration and that the impact of migration on output and income distribution is even greater than in the case of a closed economy.[250]

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[250] For a detailed discussion see A. Venables, "Trade liberalization and factor mobility: an overview", in R. Faini, J. De Melo and K. Zimmermann (eds.), *Migration. The Controversies and the Evidence* (Cambridge, Cambridge University Press, 1999), pp. 23-48; D. Trefler,

A calibration of the impact of migration in an open economy is beyond the scope of this paper. One aspect does, however, deserve special attention from an empirical perspective: a large part of the output of the European economies consists of non-tradable goods, e.g. goods which are not traded on international markets. This is true of large parts of the service sectors, crafts and, to a lesser extent, the construction sector. An important question in assessing the impact of migration on host labour markets is therefore which sector determines the marginal demand for specific types of labour: if, for example, the marginal demand for manual workers in a region is from the cleaning sector, then, as expected in the closed economy framework, the wages of manual workers will fall if migration occurs. If, however, the marginal demand comes from the automobile sector, the regional economy may adjust by increasing the production of automobiles, and wages of manual workers may then remain unchanged. Thus, it is basically an empirical question of whether the open or the closed economy framework is most appropriate in analysing the impact of migration on wages and employment.

(vii) The empirical evidence

A considerable literature has evolved which assesses the impact of migration on native employment and wages in a number of European countries. Most of these studies rest explicitly or implicitly on the one-good framework. One branch of the literature estimates a traditional wage equation, where the wage is explained by a vector of human capital characteristics, macro variables, which should control for regional or sectoral demand shocks, and a measure of the density of migrants in specific regions or branches. Another branch of the literature, following the seminal contribution of Grossman,[251] estimates the elasticity of substitutionality of different types of labour in the production function. Both approaches rely on the theoretical assumption that a change in the proportion of factors through migration involves a change in the income of the respective factor. The income of a factor will increase if labour migration affects the productivity of the factor positively, and vice versa. In the first case, immigrant labour is perceived as a complement to, and in the second as a substitute for, the respective factor. The empirical literature focuses largely on the impact of migration on wages and employment; its impact on GDP growth is rarely addressed and its influence on capital income is usually ignored because detailed data on capital stocks are unavailable.[252]

Most empirical studies rely either on a cross-section of regions or of branches and use variations in the density of migrants to identify their impact on wages and employment. This approach suffers from two fundamental problems:[253] first, economies are not considered to be able to adjust to an increasing supply of labour through a change in the structure of traded goods and the output mix. Even if migration does affect wages or employment at a national level, the presence of trade between regions, together with capital flows and the migration of natives, may eventually result in the equalization of factor prices across regions. Consequently, the impact of migration cannot be measured using the variance of wages across regions. However, these studies may capture the short-term impact of migration on labour markets, since it takes time for regional wage and employment differentials to disappear.

Second, migrants usually tend to move to the relatively prosperous regions or branches. A naive regression of local wage levels or unemployment rates against the share of migrants may yield the spurious result that migration leads to higher wages or increasing employment. This problem can be circumvented by using first differences, i.e. by regressing the change in wages or employment against the change in the migrant density, if migrants choose their location on the basis of present wage and employment levels. In this case, the migrant density is not affected by changes in wages or employment. However, if location decisions are influenced by expectations for wage or employment growth, the problem remains.[254]

Many estimates therefore rely on the instrumental variable technique in order to control for the endogeneity of migration decisions. The challenge is to find a suitable instrument, i.e. a variable which is sufficiently correlated with migration density, but which is not correlated with the wage or employment variables. The choice of suitable instruments is a controversial topic in the literature, so that a good deal of uncertainty surrounds all the empirical findings.

Table 5.3.6 summarizes the findings of a number of empirical studies on the wage impact of migration in Europe. Columns 7-10 report the elasticity between a percentage change in wages and a 1 percentage point increase in the proportion of foreign citizens, which is equal to an increase in employment through migration by 1 per cent.

Immigrants and Natives in General Equilibrium Trade Models, NBER Working Paper, No. 6209 (Cambridge, MA), October 1997.

[251] J. Grossman, "The substitutionality of natives and immigrants in production", *Review of Economics and Statistics*, Vol. 64, 1982, pp. 596-603.

[252] As a consequence, the studies relying on a production function framework explicitly assume the separability of production functions between capital and labour. Many authors argue that this is not imprudent, because the assumption of separability between capital and labour is confirmed by some empirical evidence. T. Bauer, "Do immigrants reduce native wages? Evidence from Germany", University of Munich, *Münchner Wirtschaftswissenschaftliche Beiträge 97* (Munich), 1997.

[253] G. Borjas, "The economic benefits from immigration", *Journal of Economic Perspectives*, Vol. 9, 1995, pp. 3-22; R. Friedberg and J. Hunt, "The impact of immigrants on host country wages, employment and growth", *Journal of Economic Perspectives*, Vol. 9, 1995, pp. 23-44.

[254] R. Friedberg and J. Hunt, op. cit.

TABLE 5.3.6

The wage impact of migration: a survey of European studies, 1992-2002

						Impact on native wages [a]			
Study	*Year*	*Country*	*Approach*	*Data base*	*Control for endogeneity*	*All*	*Less skilled*	*Medium skilled*	*High skilled*
DeNew and Zimmermann	1994	Germany	Wage equation	Household panel (GSOEP, 1982-1989)	Instrumental variables	-4.1	-5.3[b]	..	1.4[c]
DeNew and Zimmermann	1994	Germany	Wage equation	Household panel (GSOEP, 1982-1989)	Instrumental variables	..	-6.4[b]	..	..
Haisken-DeNew and Zimmermann	1995	Germany	Wage equation	Household panel (GSOEP, 1982-1989)	Instrumental variables	0.6	0.2[b]	..	1.3[c]
Bauer	1997	Germany	Production function (translog)	Cross-section, IAB-employment sample (1990)	Instrumental variables	..	0.2[d]	–[e]	0.1[fg]
Gavasto, Venturini and Villosio	1999	Italy	Wage equation	Panel, Social Security Archive (SSA)	Estimation in first differences	0.1	0.1[b]	..	0.1[c]
Brücker, Kreyenfeld and Schräpler	2001	Germany	Wage equation	IAB-employment sample (1990-1995)	Instrumental variables	-0.6	-1.6[b]	..	-0.1[c]
Trabold and Trübswetter	2002	Germany	Wage equation	IAB-employment sample (1990-1995)	Estimation in first differences	0.014	0.03	0.014	0.014
Hofer and Huber	2001	Austria	Wage equation	Social security records	Instrumental variables	-0.3	-0.4[b]		0.1[c]
Hunt	1992	France	Differenced cross-sectional regression (natural experiment)	Cross-section of regions, 1962-1968	Instrumental variables	0-0.8	..	..	..
Winter-Ebmer and Zimmermann	2000	Austria, Germany	Panel regression across industries	Industry level data (Austria: 1987-1994, Germany: 1986-1994)	Instrumental variables	-0.32 [h] 0.02 [i]	..	..	..

Source: J. DeNew and K. Zimmermann, "Native wage impacts of foreign labor: a random effects panel analysis", *Journal of Population Economics*, Vol. 7, 1994, pp. 177-192; J. DeNew and K. Zimmermann, "Blue-collar labor vulnerability: wage impacts of migration", in G. Steinmann and R. Ulrich (eds.), *The Economic Consequences of Immigration to Germany* (Heidelberg, Physica, 1994), pp. 81-89; K. Zimmerman, *Wage and Mobility Effects of Trade and Migration*, CEPR Discussion Paper, No. 1318 (London), January 1995; T. Bauer, "Do immigrants reduce native wages? Evidence from Germany", *Münchner Wirtschaftswissenschaftliche Beiträge 97* (Munich), 1997; A. Gavasto, A. Venturini and C. Villosio, "Do immigrants compete with natives?", *Labour*, Vol. 13, 1999, pp. 603-622; H. Brücker, M. Kreyenfeld and J. Schräpler, *Trade and Migration: Impact on Wages, Employment and Labour Mobility in Western Germany*, German Institute for Economic Research (Berlin), 1999, mimeo; H. Trabold and P. Trübswetter, "Schätzung der Beschäftigungs- und Lohneffekte der Zuwanderung", in H. Brücker, H. Trabold, P. Trübswetter and C. Weise (eds.), *Migration: Potential und Effekte für den deutschen Arbeitsmarkt*, Final Report for the Hans-Böckler-Foundation, DIW (Berlin), 2001; H. Hofer and P. Huber, *Eastward Enlargement, Trade and Migration: Impact on the Austrian Labor Market*, Institute of Advanced Studies (Vienna), 1999, mimeo; J. Hunt, "The impact of the 1962 repatriates from Algeria on the French labor market", *Industrial and Labor Relations Review*, Vol. 45, 1992, pp. 556-572; R. Winter-Ebmer and K. Zimmermann, "East-west trade and migration: the Austro-German case", in R. Faini, J. De Melo and K. Zimmermann (eds.), *Migration. The Controversies and the Evidence* (Cambridge, Cambridge University Press, 1999), pp. 296-328.

[a] Change in wages associated with an increase in the share of foreigners in the total labour force by 1 percentage point. Point elasticities from some studies are converted at the sample mean by the author.

[b] Blue-collar workers.

[c] White-collar workers.

[d] Unskilled workers.

[e] Skilled, blue-collar workers.

[f] High-skilled, white-collar workers.

[g] Derived from the cross-elasticities for several foreigner groups weighted by their present shares in foreign employment.

[h] Austria.

[i] Germany.

The majority of empirical studies estimate wage equations based on household survey or social security data. These data sets allow for the control of individual characteristics and the capture of the impact of migration on different types of workers. The findings of these studies depend heavily on the choice of instrumental variables. The upper limit is marked by the two studies by DeNew and Zimmermann,[255] based on data from the German Socio-economic Panel (GSOEP), which estimate that an increase in the share of foreign citizens of 1 per cent will induce a loss of 4.1 per cent in domestic wages. The impact is even larger for blue-collar workers, who suffer a loss of between 5.1 per cent[256] and 6.3 per cent,[257] while the wages of white-collar workers increase by 1.4 per cent. The findings from the non-instrumented regressions are much lower. Considerable differences exist between the non-instrumented and the instrumental variable estimates and so the authors warn the reader that their results may be affected by the choice of unsuitable instruments. Indeed, a series of follow-up studies based on the same data set find much lower wage effects, ranging between 0.6 per cent and -0.5 per cent, than those in the studies reported above.[258] Similarly, Brücker, Kreyenfeld and Schräpler find that a 1 per cent increase in the proportion of foreign citizens can reduce native wages in a given branch by up to 0.6 per cent.[259]

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[255] J. DeNew and K. Zimmermann, "Native wage impacts of foreign labor: a random effects panel analysis", *Journal of Population Economics*, Vol. 7, 1994, pp. 177-192; idem, "Blue-collar labor vulnerability: wage impacts of migration", in G. Steinmann and R. Ulrich (eds.), *The Economic Consequences of Immigration to Germany* (Heidelberg, Physica, 1994), pp. 81-89.

[256] J. DeNew and K. Zimmermann, "Native wage impacts ...", op. cit.

[257] J. DeNew and K. Zimmermann, "Blue-collar labour ...", op. cit.

In a study of Austria, Winter-Ebmer and Zweimüller estimate that the wage response to an increase in the proportion of foreign citizens of 1 per cent lies in an interval of -0.0041 and 0.0054 per cent. This implies that the impact of a 1 per cent increase in the proportion of foreign citizens from 5 to 6 per cent in Austria will range between -0.08 and 0.11 per cent.[260]

Bauer estimates the elasticities of substitution and complementarities for different types of labour on the basis of a translog-production function. The proportion of immigrants is again instrumented. Somewhat surprisingly, he finds that unskilled migrants and unskilled natives are complementary, i.e. an increase in the share of unskilled foreign workers of 1 percentage point increases the wages of unskilled natives by 0.2 per cent. The only group of native workers which is negatively affected by migration are medium-skilled natives, whose wages decline by 0.03 per cent if the proportion of unskilled migrants increases by 1 percentage point. However, an increase in foreign employment reduces the wages of migrant workers substantially.[261]

Recent studies have cast increasing doubts on the use of instrumental variables. Since no instruments can be identified which pass the statistical validity tests, wage equations have been estimated in first differences without instrumental variables. Interestingly enough, these studies find small, but positive effects of migration on native wages.[262]

Another strand of the literature focuses on "natural experiments", i.e. episodes of mass migration, which have been induced by non-economic factors. The seminal example in the literature is the "Mariel Boatlift",[263] i.e. Castro's permission for some 125,000 persons to emigrate from the Mariel port in Cuba in 1980. More than 50 per cent of these migrants settled in the Miami region, thus increasing the local population by 7 per cent. Two examples that have been studied in Europe are the immigration of the "*pieds noirs*" to France after the independence of Algeria in 1962,[264] and the return migration to Portugal from Angola and Mozambique following the 1974 revolution.[265] In the first case, the repatriation from Algeria increased the French population by 1.6 per cent with most of the repatriates settling in a few regions in the south of France. In the second case, the "*retornados*" increased the Portuguese population by almost 7 per cent within three years. The advantage of a natural experiment is that it allows the impact of a migration shock that has not been caused by economic forces to be studied.

In her study of return migration to France, Hunt finds that an increase in the repatriated population share of 1 per cent reduced native wages by at most 0.8 per cent.[266] The results for France are similar to those for the Mariel boatlift.[267] The findings of the Carrington and DeLima study of Portugal are less conclusive, since only data for wages in the construction sector were available and the study also had to control for other regional shocks that affected the results. Depending on the specifications of the model, it was found that an increase in the share of repatriates in the population reduced native wages by between 0.15 and 2.5 per cent.[268]

Altogether, the empirical findings summarized in table 5.3.6 indicate, with the exception of a few outliers, that a 1 per cent increase in the labour force through migration yields a change in native wages of between minus and plus 1 per cent; the majority of studies put the change in native wages in a range of between minus and plus 0.3 per cent. It is important to note that many of the non-instrumented studies find a complementarity between immigrant and native labour, i.e. that the wages of natives tend to increase as a result of immigration. In contrast, the calibration exercise above (sections 5.3(i)-5.3(ii)) indicates that, under the assumption of flexible labour markets, the wages of manual workers fall and those of skilled workers increase if migration increases the labour force. Thus, the findings from the empirical studies are not completely at odds with the results from the calibration exercise, but in general the actual wage response to migration seem smaller than expected on the basis of the model of an isolated economy. However, because of methodological problems, a good deal of uncertainty surrounds all the empirical findings.

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[258] K. Zimmerman, *Wage and Mobility Effects of Trade and Migration*, CEPR Discussion Paper, No. 1318 (London), January 1995; see also the findings in J. Haisken-DeNew, *Migration and Inter-industry Wage Structure in Germany* (Berlin, Springer, 1996); T. Bauer, *Arbeitsmarkteffekte der Migration und Einwanderungspolitik. Eine Analyse für die Bundesrepublik Deutschland* (Heidelberg, Physica, 1998).

[259] H. Brücker, M. Kreyenfeld and J. Schräpler, *Trade and Migration: Impact on Wages, Employment and Labour Mobility in Western Germany*, German Institute for Economic Research (DIW) (Berlin), 1999, mimeo.

[260] R. Winter-Ebmer and J. Zweimüller, "Immigration and the earnings of young native workers", *Oxford Economic Papers*, Vol. 48, 1996, pp. 473-491.

[261] T. Bauer, "Do immigrants reduce …", op. cit.

[262] A. Gavasto, A. Venturini and C. Villosio, "Do immigrants compete with natives?", *Labour*, Vol. 13, 1999, pp. 603-622; H. Trabold and P. Trübswetter, "Schätzung der Beschäftigungs- und Lohneffekte der Zuwanderung", in H. Brücker, H. Trabold, P. Trübswetter and C. Weise, *Migration: Potential und Effekte für den deutschen Arbeitsmarkt*, Final Report for the Hans-Böckler-Foundation, DIW (Berlin), 2001.

[263] D. Card, "The impact of the Mariel Boatlift on the Miami labor market", *Industrial and Labor Relations Review*, Vol. 43, 1990, pp. 245-257.

[264] J. Hunt, "The impact of the 1962 repatriates from Algeria on the French labor market", *Industrial and Labor Relations Review*, Vol. 45, 1992, pp. 556-572.

[265] W. Carrington and P. DeLima, "The impact of the 1970s repatriates from Africa on the Portuguese labour market", *Industrial and Labor Relations Review*, Vol. 49, 1996, pp. 330-346.

[266] J. Hunt, op. cit.

[267] D. Card, op. cit.

[268] W. Carrington and P. DeLima, op. cit.

Does one migrant replace one native worker?

The finding that immigration has only a small, if any, effect on native wages is not per se surprising. If the European system of wage determination involves wage compression, one might expect that labour markets would adjust by increasing unemployment in response to the influx of foreign labour (on the basis of the one-good framework sketched above). However, there is little evidence that immigration leads to higher unemployment. In one of the few macroeconometric studies on the impact of migration on the labour market, Gross found a *negative*, long-run impact of migration on the unemployment rate. Increasing the annual immigration rate by 0.1 percentage points from 0.1 to 0.2 per cent reduces the long-run equilibrium rate for unemployment by 0.15 percentage points, while in the short run, the unemployment rate may increase by up to 0.05 percentage points.[269] Gross argues that this counter-intuitive result is consistent with a number of models, either where migrant workers complement native workers or where the demand of migrants for goods and services creates a net gain in jobs in the host country independently of their participation in the labour market.

A number of studies based on individual data sets, and referring to regional differences in unemployment rates, yield either small displacement effects or confirm the hypothesis of a complementary relationship between migrant and native workers: in the case of Germany, Winkelmann and Zimmermann[270] and Mühleisen and Zimmermann[271] found no significant correlation between migrant density and either the individual probability of becoming unemployed or the frequency of unemployment. Another German study based on regional data found only a weak correlation between local unemployment rates and the density of migrants.[272] Moreover, the signs are ambiguous in different specifications. Similar results have been obtained by Hatizius.[273]

The results of the studies on the employment impact of migration, however, are again heavily affected by the use of instrumental variables. For example, Brücker, Kreyenfeld and Schräpler[274] estimate that an increase in the proportion of foreign citizens of 1 percentage point in a branch increases the individual risk of becoming unemployed by around 0.2 per cent. In this regression, the proportion of foreign citizens has been instrumented using lagged values of the same variable. On the basis of the same data, Trabold and Trübswetter find that the likelihood of natives becoming unemployed declines as the density of immigrants increases in a non-instrumented regression.[275] The evidence from the other countries in table 5.3.7 is similar.

The findings of the empirical studies on the employment impact of migration cannot be easily compared with the results of the simulation model, since most of the findings refer to individual employment risks rather than unemployment rates. Nevertheless, a similar pattern can be observed in the case of the studies of the wage impact: the calibration of models with rigid wages indicate that the total unemployment rate may increase by 0.2 to 0.5 per cent (manual workers by 0.4 to 1 per cent) if the workforce increases by 1 per cent through migration. With the exception of the instrumented regressions in Winter-Ebmer and Zweimüller[276] and Hofer and Huber,[277] the empirical studies find that the individual displacement risks increase within a range of between zero and 0.2 per cent.

Thus, although the results vary according to the methodologies employed the general conclusion of these studies is that: "… there is little evidence for displacement effects due to immigration. This is true in particular for unemployment rates."[278] Although in-depth evidence is missing, this suggests that the open economy framework

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[269] Gross considers an increase in the quarterly rate of migration from 0.025 per cent to 0.046 per cent; this corresponds to an increase in the annual immigration rate from 0.1 per cent to 1.82 per cent. D. Gross, *Three Million Foreigners, Three Million Unemployed? Immigration and the French Labour Market*, IMF Working Paper WP/99/124 (Washington, D.C.), September 1999.

[270] R. Winkelmann and K. Zimmermann, "Ageing, migration and labour mobility", in P. Johnson and K. Zimmermann (eds.), *Labour Markets in an Ageing Europe* (Cambridge, Cambridge University Press, 1993), pp. 255-283.

[271] M. Mühleisen and K. Zimmermann, "A panel analysis of job changes and unemployment", *European Economic Review*, Vol. 38, 1994, pp. 793-801.

[272] J. Pischke and J. Velling, "Employment effects of immigration to Germany: an analysis based on local labor markets", *Review of Economics and Statistics*, Vol. 79, 1997, pp. 594-604.

[273] J. Hatizius, *The Unemployment and Earnings Effect of German Immigration*, Oxford Institute of Economics and Statistics, Applied Economics Discussion Paper, No. 165 (Oxford), 1994.

[274] H. Brücker, M. Kreyenfeld and J. Schräpler, op. cit.

[275] H. Trabold and P. Trübswetter, op. cit.

[276] R. Winter-Ebmer and J. Zweimüller, op. cit.

[277] H. Hofer and P. Huber, *Eastward Enlargement, Trade and Migration: Impact on the Austrian Labour Market*, Institute of Advanced Studies (Vienna), 1999, mimeo.

[278] J. Pischke and J. Velling, op. cit., p. 604.

TABLE 5.3.7

The employment impact of migration: a survey of European studies, 1992-2002

Study	*Year*	*Country*	*Approach*	*Database*	*Control for endogeneity*	*Impact on employment*
Gang and Rivera-Batiz	1996	EU-12	Estimation of individual (un-)employment probability (Probit)	Cross-section of individuals (Eurobarometer 1988)	None	Positive, but insignificant correlation between unemployment probability and foreigner density
Gang and Rivera-Batiz	1999	EU-12	Estimation of individual (un-)employment probability (Probit)	Cross-section of individuals (Eurobarometer 1988)	None	Weak, but significant positive correlation between unemployment probability and foreigner density
Hunt	1992	France	Differenced cross-sectional regression (natural experiment)	Cross-section of regions, 1962-1968	Instrumental variables	An increase of the foreigner share by 1 percentage point increases native unemployment rate by 0.2 percentage points
Mühleisen and Zimmermann	1994	Germany	Estimation of individual (un-)employment probability (Probit)	Household panel (GSOEP, 1982-1989)	None	No significant impact of foreigner share on unemployment probability
Villosio and Venturini	2002	Italy	Estimation of individual (un-)employment probability (Probit)	Cross-section of individuals (labour force survey, 1993-1997)	No, tests reject endogeneity	Ambiguous signs for both, displacement risks and entry probability
Winkelmann and Zimmermann	1993	Germany	Estimation of individual (un-)employment probability (Poisson-distribution)	Household panel (GSOEP, 1974-1984)	None	No significant increase of unemployment frequency of natives
Winter-Ebmer and Zweimüller	1994	Austria	Estimation of individual (un-)employment probability (Probit)	Cross-section of individuals (social security records 1988-1989, 1991-1992)	Instrumental variables	An increase of the foreigner share by 1 percentage point increases individual displacement risks by -1 to 1.1 per cent (instrumented), 0.1 to 0.4 per cent (not instrumented)
Hofer and Huber	1999	Austria	Estimation of individual (un-)employment probability (Probit)	Cross-section of individuals (social security records 1991-1994)	Instrumental variables	An increase in the foreigner share by 1 percentage point increases individual displacement risks by 0.8 per cent
Brücker, Schräpler and Kreyenfeld	1999	Germany	Estimation of individual (un-)employment probability (Probit)	Cross-section of individuals (IAB-employment sample, 1990-1995)	Instrumental variables	An increase in the foreigner share by 1 percentage point increases individual displacement risks by 0.2 per cent
Pischke and Velling	1997	Germany	Estimation of different panel models	Regional data (labour market areas and counties), 1985-1989	Instrumental variables	Weak correlation between foreigner share and unemployment rate with ambiguous signs
Winter-Ebmer and Zimmermann	2000	Austria, Germany	Panel regression across industries	Industry level data 1987-1994 (Austria), 1986-1994 (Germany)	Instrumental variables	An increase in the foreigner share by 1 percentage point increases (decreases) total employment by -0.002 per cent (Austria) and 0.025 per cent (Germany), and native employment by -0.25 per cent (Austria) and -0.04 per cent (Germany)

Source: I. Gang and F. Rivera-Batiz, "Unemployment and attitudes towards foreigners in Germany", in G. Steinmann and R. Ulrich (eds.), *The Economic Consequences of Immigration to Germany* (Heidelberg, Physica, 1994), pp. 121-154; idem, *Immigrants and Unemployment in Europe*, IZA Discussion Paper, No. 70 (Bonn), 1999; J. Hunt, "The impact of the 1962 repatriates from Algeria on the French labor market", *Industrial and Labor Relations Review*, Vol. 45, 1992, pp. 556-572; M. Mühleisen and K. Zimmermann, "A panel analysis of job changes and unemployment", *European Economic Review*, Vol. 38, 1994, pp. 793-801; C. Villosio and A. Venturini, *Are Immigrants Competing with Natives in the Italian Labour Market? The Employment Effect*, University of Turin, 2002, mimeo; R. Winkelmann and K. Zimmermann, "Ageing, migration and labour mobility", in P. Johnson and K. Zimmermann (eds.), *Labour Markets in an Ageing Europe* (Cambridge, Cambridge University Press, 1993), pp. 255-283; R. Winter-Ebmer and J. Zweimüller, *Do Immigrants Displace Native Workers? The Austrian Experience*, CEPR Discussion Paper, No. 991 (London), July 1994; H. Hofer and P. Huber, *Eastward Enlargement, Trade and Migration: Impact on the Austrian Labour Market*, Institute of Advanced Studies (Vienna), 1999, mimeo; H. Brücker, M. Kreyenfeld and J. Schräpler, *Trade and Migration: Impact on Wages, Employment and Labour Mobility in Western Germany*, German Institute for Economic Research (Berlin), 1999, mimeo; J. Pischke and J. Velling, "Employment effects of immigration to Germany: an analysis based on local labor markets", *Review of Economics and Statistics*, Vol. 79, 1997, pp. 594-604;. R. Winter-Ebmer and K. Zimmermann, "East-west trade and migration: the Austro-German case", in R. Faini, J. De Melo and K. Zimmermann (eds.), *Migration. The Controversies and the Evidence* (Cambridge, Cambridge University Press, 1999), pp. 296-328.

Note: Elasticities have been converted at the sample mean by the author.

might be more appropriate for analysing the impact of migration on labour markets than closed economy models. The empirical evidence, however, indicates that the impact of migration on wages and employment in host labour markets is much smaller than is widely believed to be the case.

5.4. Can migration alleviate the effects of population ageing on the labour force?

The comparative-static analysis in the previous section indicates that migration can increase the GDP of host countries substantially, but that most of these gains accrue to the migrants. The impact on the income of natives is relatively small, or, if labour markets do not clear, even negative. The picture may change, however, if the fiscal implications of migration are considered. The average age of the populations and the age dependency ratios are increasing rapidly in west European countries and elsewhere. The traditional source countries for European migration are – to varying degrees – also affected by population ageing. As a result, there is increased pressure on public finances and social security systems. In most west European countries, the financial adjustments to the demographic change have yet to be made.

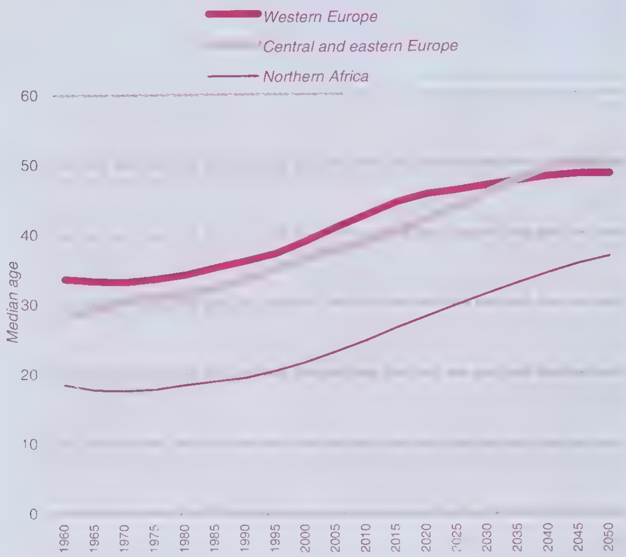
This section discusses whether migration can alleviate the demographic burden in the western European countries. It focuses on two key questions: first, can migration significantly affect the demographic structure of the population (section 5.4(i))? Second, does migration contribute to an improvement in the sustainability of the fiscal budget in host counties (section 5.4(ii))?

(i) Can migration affect the demographic structure of the European population?

Low fertility rates and increasing life expectancy are changing the demographic structure of the European population dramatically: according to demographic projections by the United Nations Population Division[279] and the World Bank,[280] the median age of the population in western Europe increased from 34 years in 1960 to 39 years in 2000, and will increase to almost 49 years by 2050. The traditional and potential source countries of European migration are similarly affected by this ageing process: the median age of the population in the southern members of the EU is as high or even higher than the west European average, and that of Turkey and Yugoslavia is around five years below that of western Europe. The median age of the central and eastern European countries, at almost 37 years, was slightly below that of western Europe in 2000, but it will be higher in 2050. A substantial difference in the population age structure now exists only between western European and northern Africa, where the median age was 22 years in 2000 and is expected to increase to 37 years by 2050 (chart 5.4.1).

CHART 5.4.1

Median age of the European population, 1960-2050



Source: As for chart 5.2.2.

This secular increase in the age of the European population implies that the age dependency ratio (i.e. the ratio of the non-working-age population to the working-age population) will increase substantially. According to the demographic projections of the World Bank, the age dependency ratio will start to rise from just below 50 per cent in western Europe after 2010 and will tend to achieve its peak at around 80 per cent four decades later. This general trend holds for all EU members, but Germany and the south European countries, due to extraordinarily low fertility rates, are particularly affected.

These projections rely on a number of assumptions including one that migration has only a minor impact on population growth. Migration will not prevent the ageing process, but it may alleviate it to some extent. According to a recent study by the United Nations,[281] an average annual net migration of around 1.4 million people will be needed between 1995 and 2050 to keep the proportion of the working-age population in the European Union stable. This corresponds to an increase in the net annual inflow from 0.8 people per thousand in western Europe between 1950 and 2000 to 3.7 per thousand over the next five decades.

A more detailed projection for Germany shows that even higher migration rates would be needed to stabilize the ageing process.[282] In a hypothetical scenario with no migration the German population will decline by one third or around 24 million persons between 2000 and 2050. If the net annual migration inflow remains at its historical average of some 200,000 people (2.5 people per thousand) the decline in the population would be limited to 12 per cent or some 10 million people. In order to achieve a constant population, the annual net inflow has to increase to 300,000 people (3.8 people per thousand) in 2010, and to 500,000-600,000 persons (6.3 persons per thousand) in 2030. Without any naturalization, the share of the foreign population will increase from 9 per cent to 20 per cent, if migration continues at its historical rate, and to 28 per cent if it increases at a rate which holds the German population constant. The ratio of the population aged above 64 relative to those aged 18-64 will increase from 0.24 in 2000 to 0.53 in 2050 with an annual net inflow of 200,000 people, to 0.65 in the case of zero migration, and to 0.43 if migration increases to a level which holds the population constant. These projections assume that the average age of migrants arriving for the first time in Germany remains constant.[283]

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[279] United Nations Population Division, *World Population Prospects – Population Database* (http://esa.un.org/unpp/), 16 April 2002.

[280] World Bank, *World Development Indicators* (Washington, D.C.), CD-ROM, 2001.

[281] United Nations, *Replacement Migration: Is it a Solution to Declining and Ageing Populations?* Population Studies No. 206 (United Nations publication, Sales No. 01.XIII.19), 2000.

[282] H. Bonin, *Fiskalische Effekte der Zuwanderung nach Deutschland: Eine Generationenbilanz,* IZA Discussion Papers, No. 305 (Bonn), June 2001; see also H. Birg, *Simulationsrechnungen zur Bevölkerungsentwicklung in den alten und neuen Bundesländern im 21.*

Thus, migration can contribute to mitigating the ageing process significantly if migration rates remain at or rise above their historical levels. Whether this is likely is hard to assess. On the one hand, the large income gap between western Europe and the countries in eastern and south-eastern Europe as well as between western Europe and northern Africa may act as an incentive for further migration. Several studies indicate that around 5 per cent of the population in the accession candidates in central and eastern Europe could migrate to the EU when free movement of labour is introduced.[284] These countries have a total population of around 105 million people, or around one third of the total population of central and eastern Europe and the former Soviet Union. Moreover, south-eastern Europe and north Africa still have a substantial migration potential.

On the other hand, the propensity to migrate is likely to decline with the age of the population in the source countries. Chart 5.4.2 shows the proportion of the 20-29 age cohort in the male population, (i.e. the individuals with the highest propensity to migrate) for the EU-15 and a representative sample of the main source countries. In the latter, the share of this age cohort is expected to decline from between 15-20 per cent in 2000, to between 10-15 per cent in 2050. Since international migration involves substantial pecuniary and non-pecuniary costs, the net present value of migration declines with the age of the migrant. Indeed, the age of more than three quarters of immigrants in the EU is below 30 years and a number of microeconometric studies show that the propensity to migrate declines with age.[285] Unfortunately, there is little empirical evidence at the macro level of the extent to which the increasing age of the population in the source countries will reduce the migration potential.[286] It is reasonable to assume, however, that for a given difference in per capita income the propensity to migrate will tend to decline over the next few decades. Nevertheless, the conclusion is that although migration will not hold up the ageing process in the traditional host countries of European migration, it can mitigate it to a substantial extent if migration rates remain at their historical levels or even increase.

(ii) Does migration alleviate the fiscal burden in ageing societies?

There is a long-running debate on whether migration can alleviate the economic consequences of ageing populations in industrialized countries. A large number of authors argue that migration cannot hold up the ageing process and should therefore not be considered as a policy instrument,[287] while others argue that it can at least mitigate the adjustment processes.[288] A number of studies have also tried to assess the fiscal impact of migration on the source countries. Several cross-sectional studies have tried to estimate the fiscal contribution of migrants relative to natives,[289] but these studies fail to capture the impact of migration on the demographic structure of the population. Others focus on

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Jahrhundert, Materialien des Instituts für Bevölkerungsforschung und Sozialpolitik, No. 45 (Bielefeld), 1998; E. Schultz, "Migration und Arbeitskräfteangebot in Deutschland bis 2050", DIW, *Wochenbericht*, Vol. 67, 2000, pp. 379-397.

[283] H. Bonin, op. cit.

[284] T. Boeri, H. Brücker et al., op. cit.; H. Brücker, "Die Folgen der Freizügigkeit ...", op. cit.; T. Straubhaar, "Ost-West Migrationspotenzial: Wie groß ist es?", *Jahrbücher für Nationalökonomie und Statistik*, Vol. 222, 2002, pp. 20-41.

[285] P. Lundborg, "Determinants of Nordic migration to Sweden", *Scandinavian Journal of Economics*, Vol. 93, 1991, pp. 363-375; C. Dustmann, "Return migration: the European experience", *Economic Policy*, Vol. 22, 1996, pp. 213-242; idem, *Return Migration, Wage Differentials and the Optimal Migration Duration*, IZA Discussion Papers, No. 264 (Bonn), February 2001.

[286] One of the few macro studies which considers the impact of ageing on potential migration can be found in M. Fertig and C. Schmidt, *Aggregate-level Migration Studies as a Tool for Forecasting Future Migration Streams*, University of Heidelberg, Department of Economics Discussion Paper, No. 324, 2000.

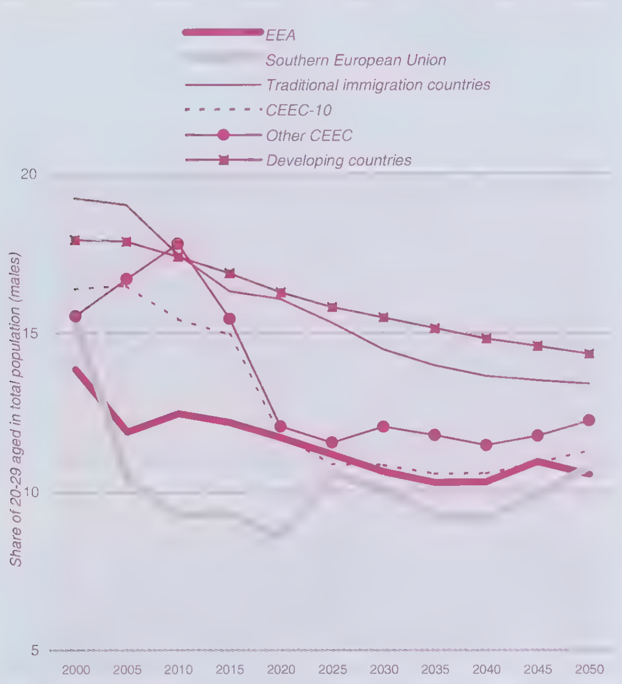
[287] D. Coleman, "Does Europe need immigrants? Population and workforce projections", *International Migration Review*, Vol. 26, 1992, pp. 413-461; OECD, *Migration: The Demographic Aspects* (Paris), 1991.

[288] A. Börsch-Supan, "Migration, social security systems and public finance", in H. Siebert (ed.), *Migration: A Challenge for Europe* (Tübingen, Mohr, 1994), pp. 111-114; T. Straubhaar and K. Zimmermann, "Towards a European migration policy", *Population Research and Policy Review*, Vol. 12, 1993, pp. 225-241.

[289] For the United States: J. Simon, "Immigrants, taxes and welfare in the United States", *Population and Development Review*, Vol. 10, 1984, pp. 55-69; J. Simon, "The economic consequences of immigration: lesson for immigration policies", in H. Giersch (ed.), *Economic Aspects of International Migration*, (Berlin), 1994, pp. 227-248; F. Blau, "The use of transfer payments by immigrants", *Industrial and Labour Relations Review*, Vol. 37, 1984, pp. 222-239. For Germany: R. Riphahn, op. cit.; G. Steinmann and R. Ulrich, *The Economic Consequences of Immigration to Germany* (Heidelberg, Physica, 1994).

CHART 5.4.2

Proportion of the 20-29 age cohort in the population of the EEA and main source countries of migration, 2000-2050



Source: World Bank, *World Development Indicators* (Washington, D.C.), 2000; author's calculations.

Note: Data cover only male population and migration.

the impact of migration on pay-as-you-go pension systems by considering its impact on the demographic structure, but do not consider the overall impact of migration on public finance and social security systems.[290] We refer here to a more comprehensive approach, which calculates the net present value of the fiscal contribution of migrants in the framework of the generational accounting approach for Germany.[291] Similar results have been obtained in Sweden.[292]

Generational accounting is based on the intertemporal budget constraint faced by the public sector. If chain-letter (Ponzi) games are ruled out, the present value of future taxes must equal the present value of future government consumption and debt servicing. Generational accounting assesses the intertemporal sustainability of public finances by calculating both the expected revenue and expenditures of the public sector, based on long-term projections of the underlying fiscal and demographic variables. The difference between expected government consumption and debt servicing on the one hand, and expected tax revenue on the other, is referred to as the sustainability gap. In the case of Germany with no migration, the sustainability gap has been estimated at an annual 6.1 per cent of GDP.

Migration can affect the sustainability gap in two ways: first, if the net tax contribution of migrants is positive, the sustainability gap declines. Second, immigration increases the number of potential taxpayers, so it can reduce the sustainability gap by increasing the tax base, even if the migrants' net contributions to the budget are negative.

The net contributions of migrants to the public finances vary with the age of the respective cohorts:[293] while net tax payments – including social security transfers – are positive over the remaining life cycle of migrants who immigrate between the ages of 11 and 48, those of the younger and older cohorts are negative. Thus, for example, the average net tax payments over the life cycle of a migrant who immigrates at the age of 30 amount to €110,000, while one who immigrates before his first birthday creates a net burden on the public finances of €60,000. At present, around 78 per cent of the immigrants belong to cohorts, which will make a net contribution to the budget over their remaining life cycle. The net contribution of the representative migrant to the public finances amounts to some €50,000.

Consider now the overall impact of migration on the sustainability gap in Germany. Assuming zero migration, as mentioned above, the sustainability could be 6.1 per cent of German GDP. An annual lump-sum tax of around €1,300 would be needed to close this gap. Immigration of 200,000 persons a year reduces the gap (through the migrants' net contribution to the budget and through the increased number of taxpayers) by 5 per cent of German GDP, which implies that the lump-sum tax falls to €1,060 or by 18 per cent per capita. The net gain for the native population is even higher – the sustainability gap declines by 24 per cent.[294]

These estimates are based on the present pattern of tax payments and transfers for the foreign population in Germany. As a consequence of their relative low human capital endowments, the net present value of the income earned by foreign citizens is around 20 per cent below that of natives, and unemployment and social welfare benefits exceed those of natives by 65 per cent. However, the higher transfers from the unemployment and social insurance systems do not cancel out the smaller transfers made to foreign citizens relative to natives by German pension schemes. The impact of immigration on public finances will depend on the human capital endowments of future immigrant cohorts. If the skill levels of future migrants continue to decline, then their impact will be smaller than that suggested by these calculations. However, recent immigrants from central and eastern Europe possess better human capital than the average immigrant and if this improvement in the average endowment were to continue the net contribution of migrants to the public budget could exceed the €50,000 estimated in the Bonin and Bonin et al. studies.[295]

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[290] B. Felderer, "Can immigration policy help to stabilize the social security systems?", in H. Giersch (ed.), op. cit., pp. 197-226; A. Börsch-Supan, op. cit.

[291] H. Bonin, op. cit.; H. Bonin, B. Raffelhüschen and J. Walliser, "Can Immigration alleviate the demographic burden", in *FinanzArchiv*, Vol. 57, 2000, pp. 1-21.

[292] K. Storesletten, "Sustaining fiscal policy through immigration", *Journal of Political Economy*, Vol. 108, 2000, pp. 300-323.

[293] H. Bonin, op. cit.; H. Bonin, B. Raffelhüschen and J. Walliser, op. cit.

[294] H. Bonin, op. cit.

Altogether, this generational accounting exercise demonstrates that, against the background of rapidly ageing populations, the fiscal gains for natives from future immigration are substantial. It is reasonable to assume that similar fiscal gains would accrue to other host countries in western Europe, since they are subject to the same demographic trend. Migration, however, will aggravate the fiscal burden in the source countries of European migration, particularly in central and eastern Europe where the population will age even more rapidly than in western Europe since fertility rates have declined sharply since the start of transition. This does not imply that migration is inefficient: the economic consequences of the ageing process can be alleviated if production factors – physical capital as well as human resources – move to those countries and regions where their productivity is highest. However, migration may involve externality effects. For example, if the education of a skilled migrant to western Europe is financed by government expenditure in central and eastern Europe, then migration creates a negative externality for the budget in the source country and a positive one for the host country. For the latter to compensate the source country for these expenditures would not only be fair, it would also help to improve the efficiency of the allocation of human resources.

5.5 Conclusion

A large number of economic models predict that labour migration creates efficiency gains, which result from the relocation of human resources from activities where their productivity is relatively low to where it is relatively high. This simple insight is often ignored in the public debate on the economic and social effects of migration, which focuses largely on its impact on the welfare of natives in the host countries. While economic theory predicts that migrants will unambiguously gain from migration, it is less clear whether natives in the host and the source countries will benefit or lose from labour migration. In this paper, an attempt has been made to shed some light on this issue from different angles.

The standard model showing the impact of migration in a closed economy with a fixed capital stock predicts that the income of production factors which are complements to immigrant labour will increase in the host country, while those production factors for which immigrant labour is a substitute will lose income. The total income of natives in host countries will increase through migration, while the converse holds for those in the source countries. A calibration of the standard model suggests that the impact of migration on total GDP in both the host and the source countries can be substantial, while the impact on the aggregate income of natives in both countries is negligible. Most of the gains from migration thus accrue to the migrants. The more the skills of the migrants complement the skills of the native labour force, the larger is the aggregate gain of natives in the host country. However, migration can substantially reduce the wages of natives with skills similar to those of the immigrants. Consequently, income inequality in the host countries tends to increase if migrants are relatively low skilled. This does not imply, however, that migration tends to increase income inequality in the region as a whole: as long as the migrants are low skilled relative to the home population, income disparities will tend to decline in Europe.

These results rely on the assumption that wages respond flexibly to the change in labour supply caused by migration. In the case of wage rigidity, the impact of migration is ambiguous: if the wages for skilled labour are flexible and those for unskilled labour are not, total unemployment will tend to increase and the aggregate income of natives to fall when the migrants are unskilled; the converse holds when the migrants are skilled. Note that in this case, the gains of natives from skilled migration can significantly exceed those accruing from flexible labour markets. If the same assumptions hold for the source country, then skilled migration increases unemployment and reduces the income of natives to an even greater extent that in the case of flexible labour markets. This is an additional dimension to the traditional "brain drain" argument. However, it is worth noting that migration still increases the aggregate GDP of both regions, even if wages are extremely rigid.

On average, migrants are more than proportionally affected by unemployment in Europe. As a consequence, unemployment and other welfare benefits redistribute income from natives to migrants in the host country. Moreover, when unemployment benefits exist, the size of the migrant population increases, as does the ratio of migrants with high unemployment risks to those with low risks. A calibration of these effects nevertheless demonstrates that – for a given income gap between the host and source economies in Europe, and at the prevailing level benefit in the host countries – the impact of unemployment benefits on the skill distribution of migrants is negligible, and on the scale of migration is also fairly moderate. Moreover, since higher unemployment benefits are an incentive to increased migration, the aggregate impact of unemployment benefits on GDP in the whole region is positive. Nevertheless, insofar as migrants are more than proportionally affected by unemployment than natives, unemployment benefits redistribute income from natives to migrants.

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[295] H. Bonin, op. cit.; H. Bonin, B. Raffelhüschen and J. Walliser, op. cit.

Within western Europe, regional differences in wages and unemployment rates are substantial, and labour mobility between west European regions is much too small to reduce these differences. There is ample evidence that international migrants move to the relatively prosperous regions of the host countries – mainly to urban regions with relatively high wages and relatively low unemployment rates. As a consequence, the gains from migration are higher than they would appear to be when regional differences are ignored. These additional gains can be substantial.

The analytical framework used to examine migration in an otherwise closed economy helps to explain the mechanisms through which migration can affect the size and distribution of income in host and source countries. It ignores, however, the interaction between migration and trade and capital accumulation. Economies can adjust to an additional labour supply from migration not only through the labour market, but also through changes in the structure of output and of traded goods; migration can further increase production and income in the host country through additional incentives to accumulate capital. Ignoring the interaction between migration and trade may overstate, and ignoring the incentives to capital accumulation may understate, the actual impact of migration on host economies.

The influence of migration on the wages and employment opportunities of natives in the host labour markets is the subject of a large and rapidly growing volume of empirical literature. Much uncertainty still surrounds these empirical findings but, with some notable exceptions, they indicate that the impact of migration on the wages and employment of natives is significantly less than that predicted by the simulation model. Moreover, some recent studies find that migrants complement native workers, so that the wages and employment opportunities of natives tend to increase with the number of migrants. Little empirical knowledge exists as to the impact of migration on labour markets in the source countries.

International migration can provide substantial fiscal gain for countries in western Europe with rapidly ageing populations. It cannot arrest the secular process of ageing, but it can nevertheless after significantly the demographic structure of west European economies – even if immigration remains at its historical rates. Whether this will indeed be the case is hard to assess. On the one hand, the present income gap in Europe is substantial and current immigration rates in western Europe are well below those in other regions of the world with similar per capita income levels. On the other hand, the ageing process will progress in eastern Europe at the same speed as in western Europe and, hence, mitigate the incentives to migrate. The median age of populations in northern Africa will be well below that of the western European countries during the next few decades, but the average skill level of its labour force is well below that in western and eastern Europe.

Several studies have assessed the effects of migration on public finances using generational accounting, which analyses whether the current structure of public finances is sustainable given the expected flows of revenue and expenditure. In Germany, the sustainability gap is estimated to be around an annual 6 per cent of GDP. International migrants can help to reduce this gap in two ways: first though their net fiscal contribution to the host country's budget and, second, through increasing the number of taxpayers. Even taking into account that migrants pay less tax and receive more unemployment benefit and social assistance than natives (but receive less from the pension system), the net fiscal contribution of immigrants of average age is positive. A net immigration flow of 200,000 persons a year, which corresponds to the historical trend in Germany, would reduce the sustainability gap from 6 to 5 per cent of German GDP.

Taken as a whole, migration will not solve the labour market problems in Europe. The analysis of this paper, however, allows the conclusion that the aggregate gain from international migration can be substantial. The empirical evidence suggests that the adverse impact of migration on the unemployment and the wages of natives is less severe than simple models of a closed economy may indicate; and the total fiscal gains for natives in the long run can be substantial. Thus, there is something to be gained from a reform of west European immigration policies vis-à-vis non-EU and non-EEA countries.

TECHNICAL ANNEX

OUTLINE OF THE SIMULATION MODEL

The simulations of the impact of migration on output, wages and income distribution in the host and source countries in section 5.3 are based on a highly stylized model of two economies, which produce one good and apart from migration are closed. This annex describes the basic features of the model. Many aspects of it are drawn from Levine[296] but, in contrast to the Levine model, the labour market here is split between unskilled and high skilled segments with different elasticities of wages with respect to the unemployment rate.[297] The model naturally relies on a number of arbitrary assumptions, but it nevertheless helps to analyse some of the mechanisms through which migration may affect the incomes and employment of the affected parties in both the host and source countries.

Outline of the basic model

The output of the host and the source countries' economies is produced with unskilled labour, skilled labour and physical capital. The production technology has constant returns to scale and is approximated by a Cobb-Douglas function, such that:

$$Y_i = \overline{A}_i L_i^{\alpha_i} H_i^{\beta_i} \overline{K}_i^{1-\alpha_i-\beta_i}, \quad i = f, h \tag{A1}$$

where Y_i denotes output, $\overline{A}_i$ is a productivity parameter, which reflects the level of technology and institutions; L_i and H_i are unskilled and skilled labour, respectively; and $\overline{K}_i$ is physical capital. α_i, β_i, and $1-\alpha_i-\beta_i$ are the shares of unskilled labour, skilled labour and capital, respectively, in total income, and $i \in \{f, h\}$ is an index for the country of destination, *f*, and the country of origin, *h*, respectively. Let $\overline{N}_i$ be the initial pre-migration endowment of unskilled labour in country *i*, and let $\overline{S}_i$ be its initial endowment of skilled labour. Thus the post-migration allocation of unskilled labour in the country of destination and the source country is given by:

$$N_f = \overline{N}_f + \gamma M, \quad N_h = \overline{N}_h - \gamma M \tag{A2}$$

where M denotes the number of migrants, and γ the proportion of unskilled labour in the migrant population. Analogously, the post-migration allocation of skilled labour can be written as:

$$S_f = \overline{S}_f + (1-\gamma) M, \quad S_h = \overline{S}_h - (1-\gamma) M \tag{A3}$$

where $1-\gamma$ denotes the proportion of skilled workers in the migrant population. In all the simulations, it is assumed that the total labour force, i.e. the number of skilled and unskilled workers, in the host and the home country is equal in the pre-migration state. The model is "short-run" in the sense that the productivity parameter and physical capital endowments are assumed to be fixed.

Wages and the demand for labour are determined sequentially. In the first stage, wages are fixed by a bilateral bargaining monopoly between trade unions and employer federations.[298] In the second stage, profit-maximizing firms hire labour until the marginal product of labour equals the wage rate; the participants in the wage negotiations are aware of this. Given this wage-setting mechanism, wages respond – albeit imperfectly – to the unemployment rate in the economy. This allows wage rates to be expressed as functions of the unemployment rate, i.e. as:

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[296] P. Levine, op. cit.

[297] T. Bauer and K. Zimmermann, op. cit., for a similar assumption.

[298] The argument elaborated here is consistent with different models of wage setting, i.e. models with a monopoly union or a bilateral bargaining monopoly (e.g. R. Layard, S. Nickell and R. Jackson, op. cit.), efficiency wage theories (e.g. S. Salop, "A model of the natural rate of unemployment", *American Economic Review*, Vol. 74, 1979, pp. 117-125) or shirking models (C. Shapiro and J. Stiglitz, "Equilibrium unemployment as a worker discipline device", *American Economic Review*, Vol. 74, 1984, pp. 433-444). See also P. Levine, op. cit. The analysis, however, only considers the long-run response of wages to a change in labour supply, i.e. the impact of short-run fluctuations in (un-) employment rates is ignored.

$$w_{L,i} = f_i\left(u_{L,i}\right), \qquad f_i'\left(u_{L,i}\right) < 0 \tag{A4}$$

and

$$w_{H,i} = g_i\left(u_{H,i}\right), \qquad g_i'\left(u_{H,i}\right) < 0 \tag{A5}$$

where the unemployment rates for unskilled and skilled labour are defined as $u_{L,i} = 1 - L_i/N_i$ and $u_{H,i} = 1 - H_i/S_i$, respectively. Thus, the elasticity of wages with respect to the unemployment rate is allowed to differ for unskilled and skilled labour.

The impact of migration on employment is then determined by the marginal product of skilled and unskilled labour and the flexibility of wages in the respective labour markets, i.e. by:

$$\alpha_i\, \overline{A}_i\, L_i^{-(1-\alpha_i)}\, H_i^{\beta_i}\, \overline{K}_i^{1-\alpha_i-\beta_i} = f_i\left(1 - \frac{L_i}{N_i}\right) \tag{A6}$$

and

$$\beta_i\, \overline{A}_i\, L_i^{\alpha_i}\, H_i^{-(1-\beta_i)}\, \overline{K}_i^{1-\alpha_i-\beta_i} = g_i\left(1 - \frac{H_i}{S_i}\right) \tag{A7}$$

where the definitions for the unemployment rate are used on the right-hand side.

Equations (A1) to (A7) determine output, the size of the labour force, the wage rates, and the employment of unskilled and skilled workers in both economies. The semi-elasticity of the wage of unskilled labour with respect to unemployment can be written as $\eta_i = -f_i'\left(u_{L,i}\right)/w_{L,i}$, and, analogously, that for skilled labour as $\mu_i = -g_i'\left(u_{H,i}\right)/w_{H,i}$. Differentiating (A6) implicitly with respect to M then yields, after algebraic manipulation the marginal response of employment of unskilled labour, L_i, to migration:

$$\frac{dL_f}{dM} = \frac{\gamma\eta_f\left[\left(1-\beta_f\right)S_f + \mu_f H_f\right]L_f^2/N_f + \left(1-\gamma\right)\mu_f\beta_f L_f H_f N_f/S_{fi}}{\left[\left(1-\alpha_f\right)N_f + \eta_f L_f\right]\left[\left(1-\beta_f\right)S_f + \mu_f H_f\right] - \alpha_f\beta_f N_f S_f} \tag{A8}$$

and

$$\frac{dL_h}{dM} = -\frac{\gamma\eta_h\left[\left(1-\beta_h\right)S_h + \mu_h H_h\right]L_h^2/N_h + \left(1-\gamma\right)\mu_h\beta_h L_h H_h N_h/S_h}{\left[\left(1-\alpha_h\right)N_h + \eta_h L_h\right]\left[\left(1-\beta_h\right)S_h + \mu_h H_h\right] - \alpha_h\beta_h N_h S_h} \tag{A9}$$

where N_i and S_i are determined by equations (A2) and (A3). Differentiating (A7) implicitly with respect to migration analogously gives the marginal response of employment of skilled labour, H_i, to migration:

$$\frac{dH_f}{dM} = \frac{\left(1-\gamma\right)\mu_f\left[\left(1-\alpha_f\right)N_f + \eta_f L_f\right]H_f^2/S_f + \gamma\alpha_f\,\eta_f\, L_f\, H_f\, S_f/N_f}{\left[\left(1-\alpha_f\right)N_f + \eta_f L_f\right]\left[\left(1-\beta_f\right)S_f + \mu_f H_f\right] - \alpha_f\beta_f N_f S_f} \tag{A10}$$

and

$$\frac{dH_h}{dM} = -\frac{\left(1-\gamma\right)\mu_h\left[\left(1-\alpha_h\right)N_h + \eta_h L_h\right]H_h^2/S_h + \gamma\alpha_h\,\eta_h\, L_h\, H_h\, S_h/N_h}{\left[\left(1-\alpha_h\right)N_h + \eta_h L_h\right]\left[\left(1-\beta_h\right)S_h + \mu_h H_h\right] - \alpha_h\beta_h N_h S_h} \tag{A11}$$

Thus, the greater the flexibility of labour markets, i.e. the larger the semi-elasticity between the wage and the unemployment rate, the greater is the marginal response of employment with respect to migration

Consider two extreme cases: in the first, the labour markets are completely flexible, i.e. $\eta_i \rightarrow \infty$, $\mu_i \rightarrow \infty$ and $L_i \rightarrow N_i$, $H_i \rightarrow S_i$. In this case, equations (A8) and (A10) converge to γ and $(1\text{-}\gamma)$, respectively, and equations (A9) and (A11) to $\text{-}\gamma$ and $\text{-}(1\text{-}\gamma)$, respectively. The labour force in the host country then increases exactly by the number of immigrant workers, and the labour force in the home country is reduced exactly by the number of migrant workers.

This case corresponds to the textbook example of the impact of migration in an economy with labour market clearing and an inelastic supply of native labour.[299] This is our reference case as calibrated in table 5.3.1 in section 5.3.

At the other extreme, the wages for unskilled labour are perfectly inflexible, i.e. $\eta_i \to 0$, while those for skilled labour are perfectly flexible, i.e. $\mu_i \to 0$. In this case, immigration of unskilled workers does not change the level of employment for unskilled workers, but simply increases the level of unemployment for unskilled workers in the host countries. However, the immigration of skilled workers increases the level of employment for unskilled workers in the host countries, since skilled and unskilled workers are complements by assumption. Thus, the impact of migration on (un-)employment and income depends essentially on the composition of the migrant population with respect to their skill levels. This case as well as examples with different degrees of wage flexibility are calibrated in table 5.3.2 of section 5.3.

The allocation of jobs among natives and migrants

For an analysis of the impact of migration on the incomes of natives and migrants, it is necessary to make additional assumptions about the employment opportunities of natives and migrants. Following the traditional approach of Todaro[300] and Harris and Todaro,[301] it is assumed that in each period all jobs are randomly allocated among the total labour force, i.e. among natives and migrants. However, the selection process is modified to allow for the possibility that the employment opportunities of migrants are less than those of natives, i.e.

$$p_{ML,f} = \lambda\,\left(1-u_{L,f}\right),\quad p_{NL,f} = \left(1+(1-\lambda)\gamma M/N_f\right)\left(1-u_{L,f}\right) \tag{A12}$$

and

$$p_{HL,f} = \lambda\,\left(1-u_{L,f}\right),\quad p_{NH,f} = \left(1+(1-\lambda)(1-\gamma)M/N_f\right)\left(1-u_{H,f}\right) \tag{A13}$$

where p_{Mj} and p_{Nj} denote the probability of employment for migrants and natives in the host country, respectively ($j = L, H$), and the factor λ ($0 < \lambda \leq 1$) accounts for the possibility that the employment opportunities of migrants are inferior to those of natives. Note that this implies that some of the employment risks of natives are shifted to migrants. For natives in the home country we assume that the employment probabilities are simply given by:

$$p_{L,h} = 1-u_{L,h}, p_{H,h} = 1-u_{H,h} \tag{A14}$$

The role of unemployment benefits

Migration does not only affect income through wages and employment, but also through welfare benefits. In order to consider its impact on welfare benefits, it is assumed that unemployment benefits are a fixed proportion of post-tax wages, i.e. $b_i(1-t_i)w_{ij}$, where t_i denotes a uniform income tax rate, $i = f, h$, the respective country, and $j = L, H$, skilled and unskilled labour, respectively. Physical capital is not taxed. If it is assumed that the budget is balanced and if all other public expenditure is ignored, then taxes must be equal to the unemployment costs, which gives the tax rate:

$$t_i = b_i \frac{w_{Li}\, u_{Li}\, N_i + w_{Hi}\, u_{Hi}\, S_i}{\left(1-(1-b_i)u_{Li}\right)w_{Li}N_i + \left(1-(1-b_i)u_{Hi}\right)w_{Hi}S_i} \tag{A15}$$

where N_i and S_i are the post-migration endowments of unskilled and skilled labour as determined in equations (2) and (3). The impacts of varying levels of unemployment benefit and, hence, different tax rates, on the income of natives and migrants are calibrated in table 5.3.3 in section 5.3.

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[299] K. Wong, *International Trade in Goods and Factor Mobility* (Cambridge, MA, MIT Press, 1995), pp. 628-632.

[300] M. Todaro, "A model of labor migration and urban employment in less developed countries", *American Economic Review*, Vol. 59, 1969, pp. 138-148.

[301] J. Harris and M. Todaro, op. cit.

Endogenous migration

So far it is assumed that the migration rate is given. For an analysis of the impact of migration policies on welfare, however, it is also necessary to consider the determinants of the migration rate. The analysis here is limited to the simple case of permanent migration.[302]

Assume that migrants do not own any physical capital; the net present value of expected income in the foreign country for an infinitively lived household is then given by:

$$V_{fjt} = \sum_{\tau=0}^{\infty} \delta^{\tau} \left[p_{fjt+\tau} + b_f \left(1 - p_{fjt}\right)\right] \tilde{w}_{fjt}, \quad j = L, H \qquad \text{(A16)}$$

and in the home country by:

$$V_{hjt} = \sum_{\tau=0}^{\infty} \delta^{\tau} \left[p_{hjt+\tau} + b_h \left(1 - p_{hjt}\right)\right] \tilde{w}_{hjt}, \quad j = L, H \qquad \text{(A17)}$$

where $\delta < 1$ denotes the discount factor, and $\tilde{w}_{ijt} = (1 - t_i) w_{ijt}$ the post-tax wage; the employment probabilities are given by (A13) and (A14).

For convenience, it is assumed that manual workers expect that following generations will remain manual workers, while the converse holds for non-manual workers. A risk-neutral individual will migrate if the difference in the net present value of living in a foreign country and at home exceeds the net present value of all the pecuniary and non-pecuniary costs of migration, i.e. if:

$$V_{fj,t} - V_{hj,t} \geq \sum_{\tau=0}^{\infty} \delta^{\tau} C_{j,t+\tau} \qquad \text{(A18)}$$

If the migration costs are written on the left hand side of (A18) as a fraction of the net present value of living at home, i.e. as cV_{hjt}, then the factor $1/(1-\delta)$ cancels out and the following is obtained:

$$\frac{p_{jf} + b_f \left(1 - p_f\right) \tilde{w}_{jf}}{p_h + b_h \left(1 - p_h\right) \tilde{w}_{jh}} \geq 1 + c_j \qquad \text{(A19)}$$

i.e. the ratio of expected real income in the foreign and the home country has to exceed the cost factor $1 + c_j$. Note that there are no transitional dynamics in the system and all variables jump immediately to steady state values so that the time subscript can be dropped.[303]

Following Faini and Venturini,[304] Ludema and Wooton[305] and Brücker,[306] it is assumed that individuals differ with respect to their preferences and their costs of migration. In the steady state, the net present value of expected income just equals the net costs of migration for the marginal migrant. Thus, it is assumed that a macroeconomic function exists which determines the share of migrants in the home population as a function of the expected difference in per capita income in the steady state. Depending on the assumptions about the distribution of the costs of migration and of preferences across the population, different functional forms can be conceived. For the simulations here, it is assumed that the share of migrants in the labour force of the home population is a semi-logarithmic function of the ratio of expected income. This functional form is used in several macro studies on the determinants of migration.[307] Thus, the steady state share of migrants in the labour force of unskilled workers in the source country is given by the probability that the ratio of expected income in the host to the home country equals the costs of migration for the *k*th individual, i.e. by:

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[302] See P. Levine, op. cit., for a similar approach.

[303] P. Levine, op. cit.

[304] R. Faini and A. Venturini, *Migration and Growth: The Experience of Southern Europe*, CEPR Discussion Paper, No. 964 (London), May 1994.

[305] R. Ludema and I. Wooton, "Regional integration, trade and migration: are demand linkages relevant in Europe?", in R. Faini, J. De Melo and K. Zimmermann, op. cit., pp. 51-68.

[306] H. Brücker, "Die Folgen der Freizügigkeit ...", op. cit.

[307] T. Hatton, "A model of UK emigration, 1870-1913", *Review of Economics and Statistics*, Vol. 77, 1995, pp. 407-415; T. Boeri, H. Brücker et al., op. cit., H. Brücker, op. cit.

$$\frac{\gamma M}{\bar{N}_h} = \Pr\left(\frac{V_{L,f}}{V_{L,h}} \geq 1 + c_{L,k}\right) = \theta \ln\left(\frac{V_{L,f}}{V_{L,h}}\right) \tag{A20}$$

and the steady state share of migrants in the labour force of skilled workers is given analogously by:

$$\frac{(1-\gamma)M}{\bar{S}_h} = \Pr\left(\frac{V_{H,f}}{V_{H,h}} \geq 1 + c_{H,n}\right) = \sigma \ln\left(\frac{V_{H,f}}{V_{H,h}}\right) \tag{A21}$$

i.e. the propensity to migrate for skilled and unskilled workers is allowed to differ.

Based on these assumptions, we calibrated the impact of the income differential and different rates of unemployment benefit on the overall migration potential and the shares of unskilled and skilled workers in the migrant population was calibrated as in table 5.3.5 in section 5.3.

TECHNICAL ANNEX TABLE

The impact of the skill level of migrants in an environment with unemployment

Semi-elasticity of manual wages		-1.0	-1.0	-1.0	-1.0	-1.0
Semi-elasticity of non-manual wages		$-\infty$	$-\infty$	$-\infty$	$-\infty$	$-\infty$
Share of manual workers in migrant population		1.0	0.7	0.5	0.3	0.0
	Percentage change at an immigration (emigration) of 1 per cent of the labour force					
Total GDP	Host country	0.37	0.52	0.61	0.71	0.85
	Source country	-0.35	-0.63	-0.83	-1.02	-1.32
	Total region	0.17	0.19	0.21	0.22	0.24
Total income of natives	Host country	-0.24	-0.12	-0.04	0.05	0.18
	Source country	0.24	0.08	-0.03	-0.14	-0.32
	Total region	-0.11	-0.06	-0.03	–	0.05
of which:						
Manual workers	Host country	-1.66	-0.95	-0.47	0.02	0.76
	Source country	1.02	0.34	-0.11	-0.55	-1.22
	Total region	-0.72	-0.49	-0.34	-0.19	0.03
Non-manual workers	Host country	0.23	-0.01	-0.17	-0.33	-0.56
	Source country	-0.24	0.40	0.84	1.28	1.96
	Total region	0.13	0.07	0.03	-0.02	-0.09
Capital owners	Host country	0.37	0.52	0.61	0.71	0.85
	Source country	-0.35	-0.63	-0.83	-1.02	-1.32
	Total region	0.17	0.19	0.21	0.22	0.24
Total income of migrants		171.46	127.87	106.22	88.35	66.40
Nominal wage rate						
Manual workers	Host country	-0.99	-0.58	-0.30	-0.02	0.40
	Source country	0.52	0.18	-0.05	-0.29	-0.63
	Total region	0.16	0.21	0.24	0.28	0.33
Non-manual workers	Host country	0.37	0.02	-0.22	-0.45	-0.80
	Source country	-0.34	0.37	0.85	1.34	2.08
	Total region	0.21	0.27	0.30	0.33	0.38
Post-tax wage rate						
Manual workers	Host country	-1.12	-0.65	-0.34	-0.02	0.46
	Source country	0.62	0.21	-0.07	-0.34	-0.76
	Total region	0.11	0.17	0.21	0.26	0.32
Non-manual workers	Host country	0.23	-0.06	-0.26	-0.46	-0.75
	Source country	-0.24	0.40	0.84	1.28	1.96
	Total region	0.11	0.17	0.21	0.26	0.32
	Change of unemployment rate in percentage points					
Total unemployment rate	Host country	0.40	0.23	0.12	0.01	-0.16
	Source country	-0.36	-0.12	0.04	0.20	0.44
	Total region	0.02	0.06	0.08	0.10	0.14
Manual workers	Host country	0.99	0.58	0.30	0.02	-0.40
	Source country	–	0.00	–	–	–
	Total region	0.04	0.10	0.14	0.19	0.25

Source: Author's calculations.

Note: See text and technical annex for the assumptions of the simulation model.

DISCUSSANTS' COMMENTS

5.A Stanislawa Golinowska

Population mobility and economic migration have been inherent features of human history bringing different benefits at the different stages of development of the countries concerned. The EU countries are currently the receiving countries, but some 40-50 years ago south European countries were the source countries and some 100 years ago north Europeans were emigrating to the Americas. The countries of central and eastern Europe (CEE) are still countries of emigration but migration changed significantly in the 1990s. Countries such as Poland, which has been a source country for two centuries, are now becoming receiving countries – a significant change. A similar phenomenon is occurring in other countries of the region, which are close to the EU and have better prospects for integration.

Characteristics of migration from the CEE countries

The empirical evidence on migration from the CEE countries is rather poor. There are three main sources of such information:

- Official statistical data on net migration flows from CEE. These data only show permanent migration but its nature has changed substantially in recent years. Emigration from the CEE countries in the communist period was completely different from that in the 1990s, and was mainly political. The communist governments' emigration policy was aimed at encouraging selected groups (people opposed to the communist system and some ethnic groups) to leave the country.[308] In the 1990s the reasons for emigration changed from political to economic but in spite of the liberalization of cross-border movements, emigration from CEE countries has weakened; [309]
- Assessments of the potential for migration from CEE countries, and the estimates of its possible impact on labour markets and welfare in the receiving countries. Most of these assessments are based on the historical data concerning permanent migration from southern Europe. The contemporary migration from CEE countries, however, is somewhat different. The available data show that migration from the CEE countries bordering the EU now consists mostly of temporary emigration for a fixed period and cross-border commuting;
- New information about migration derived from labour force surveys (LFS). It shows that the new emigration is mostly of a limited duration, mainly seasonal and based on short-term contracts or some other type of temporary work. Such migration is strongly regulated by the host countries according to intergovernmental agreements and the demand for such jobs is relatively high.

Another feature of the present labour emigration from CEE is its dual character from the point of legality: legal (with work permits) and illegal (without work permit). Polish estimates suggest that emigration without work permits is on the same scale as legal emigration.

The profile of CEE emigrants

The profile of the CEE emigrants changed considerably in the 1990s as compared with the communist period both in terms of skills and demographic characteristics. In the past, CEE migrants were mostly skilled people.[310] Today's increased demand in the CEE region for high-skilled employees limits their outflow and attracts highly-qualified migrants from other countries (both from the west and from the east), especially in the Czech Republic, Hungary and Poland. The majority of CEE emigrants since 1990 have vocational qualifications, usually basic rather than secondary.[311] For example, the relatively low-qualified emigrants from Poland are mostly engaged in seasonal work and various forms of illegal employment (without work permit) in agriculture, the catering and hotel industry, construction and household services.[312] Generally, there are two different groups

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[308] The Hungarian emigration after 1956, the Czech and the Slovak after 1968 and the Polish in the 1980s can be explained by the repression of the political opposition or by the weak prospects for better life outside the framework of communist institutions.

[309] In 10 eastern European and Baltic countries (Bulgaria, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia) there was a clear reduction in net out-migration after 1992. Total net emigration (emigration less immigration) from the 10 countries mentioned above between 1992 and 1997 amounted to some 40,000 persons. Increased net out-migration occurred only for Poland and Romania and mainly consisted of persons of German origin. M. Lubyova, "Status of foreign residents and foreign workers in selected central and east European countries", paper presented at the OECD Seminar on *Recent Developments in Migration and the Labour Market in Central and Eastern Europe in the Context of the EU Enlargement* (Bratislava), 2-3 March 2000.

[310] Thus emigration in the 1970s and 1980s deprived Poland of its scientific resources. B. Jałowiecki, "Rynek pracy intelektualnej a migracje", in S. Golinowska and E. Marek (eds.), *Studia o procesach migracji zagranicznych, tom II - Ekonomiczne aspekty procesów migracyjnych*, Studia i Materiały IPiSS, z. 3 (Warsaw), 1994.

[311] S. Golinowska, E. Marek and A. Rajkiewicz, "Migration processes in Poland 1990-1995" in E. Hönekopp, S. Golinowska and M. Horalek (eds.), *Economic and Labour Market Development and International Migration*, No. 244 (Czech Republic, IAB Beiträge, 2001).

[312] Most of the migrants originate from villages and small towns and their trips are made possible thanks to well-developed contacts with people in the country of destination (migration net work). While it is true that these

TABLE 5.A.1

Top three nationalities among foreign workers in the CEE countries, 1998
(Per cent)

Hungary		*Poland*		*Slovakia*		*Czech Republic*		*Bulgaria*	
Romania	47.2	Ukraine	14.2	Czech Republic	36.3	Slovakia	55.1	United States	23.3
CIS	12.6	Belarus	13.3	Poland	12.2	Ukraine	17.3	Ukraine	10.2
China	4.7	Viet Nam	8.6	Ukraine	11.3	Poland	8.9	United Kingdom	7.1
								The former Yugoslav Republic of Macedonia	7.1

Source: OECD legal survey in M. Lubyova, "Status of foreign residents and foreign workers in selected central and east European countries", paper presented at the OECD Seminar on *Recent Developments in Migration and the Labour Market in Central and Eastern Europe in the Context of the EU Enlargement* (Bratislava), 2-3 March 2000; OECD SOPEMI, *Trends in International Migration*, Annual Report (Paris), 1999.

Note: Work permit holders at the end of 1998. Figures indicate percentage share of total foreign workers. For Bulgaria, the figures refer to work permits granted during September 1994-October 1999. For the Czech Republic and Slovakia, including nationals of the other country (exempted from work permit requirement).

[a] Excluding Czech workers, the three largest nationalities are: Poland (19.2), Ukraine (17.8) and the United States (7.5).

[b] Excluding Slovak workers, the three largest nationalities are: Ukraine (38.6), Poland (19.9) and Bulgaria (5.4).

among the emigrants: a small one – with better education and work permits (such as contract workers), and a larger one – consisting of those with primary vocational education, seasonal workers and often without a work permit.

With respect to age, migrants are relatively young people compared with the native employees in the receiving countries but not in the sending countries. The largest proportion of migrants is in the 30-45 year age group. The next largest group is younger, up to 30 years. The share of both sexes in emigration is very similar. As regards marital status, emigration is dominated by single people, usually male, whereas females prevail in the group of married emigrants.[313]

CEE countries are no longer exclusively source countries: they are also receiving countries

A new development in CEE migration in the 1990s was that emigration to the west was accompanied by immigration, especially to some central European countries. While the foreign population and labour force in these countries has generally been increasing, the scale of the increase has varied. In terms of the foreign population (permanent and long-term residents), the Czech Republic shows the largest increase in relative terms: at the end of 1998, the foreign population was about 2 per cent of the total population. In Hungary the share was close to 1.5 per cent. These values are comparable to those in some EU member countries. In Bulgaria foreign residents were about 1 per cent of the total population in 1998, while in Poland and Slovakia the shares were much lower (0.1 and 0.5 per cent, respectively). The immigration to Poland is rather short-term labour migration (table 5.A.1).

The immigration to CEE can be divided into three main groups:[314]

- *Immigration bearing features of the so-called primitive mobility* (mostly from the CIS countries but also from Asia). Some petty traders, in Poland for example, are engaged in various, usually short-term jobs in the grey economy or secondary labour market. The Ukrainian survey conducted in May 2001[315] and covering eight regions of the country shows that most of the Ukrainian migrants (working temporarily abroad but not in the CIS countries) in 2000 were in Poland, the Czech Republic and Italy, accounting, respectively, for 31.2, 28.2 and 14.2 per cent of the total workforce in those countries;
- *Permanent migration.* Immigrants who had been granted permanent residence abroad have been returning (from both west and east) for various reasons such as economic, political, family reunions and retirement;
- *Legal employment with a work permit.* This includes managers from the west, businessmen from Asia and specialists from the CIS.

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migrants have limited job and promotion prospects in Poland, they would have to upgrade their qualifications if they were to migrate to Poland's large urban centres – which is more difficult than casual work abroad. Thus, workers from regions situated near Warsaw (e.g. Łomża voivodship) regularly take up seasonal jobs in Belgium and do not migrate to the capital, which attracts immigrants from the east. M. Okólski, "Assessing the principal determinants of migration", in T. Frejka, M. Okólski and K. Sword (eds.), *In-depth Studies on Migration in Central and Eastern Europe: The Case of Poland,* UNECE/UNPF, Economic Studies No. 11 (United Nations publication, Sales No. GV.E.98.II.E.24), 1998, chap. 8.

[313] S. Golinowska et al., op. cit.

[314] K. Iglicka, *Poland's Postwar Dynamic of Migration* (Aldershot, Ashgate, 2001).

[315] The first special sampling survey of labour migration problems, "Life ways of the population of Ukraine", was carried out on the basis of an additional module of the labour force survey by the State Statistical Committee of Ukraine. E. Libanova and O. Poznyak, "The labour migrations from Ukraine. New migration potential from eastern countries", paper presented at the CASE conference *Beyond Transition* (Falenty), 13-14 April 2002.

Factors affecting international labour migration from CEE countries

In recent years there have been many estimates of potential migration from CEE countries in the context of future integration.[316] Most of these estimates take into account only two variables explaining the propensity to migrate: the income gap and unemployment in the source countries. These are obviously important variables but their effect depends on additional factors. For example, the Polish experience suggests that it may be misleading to consider only the income gap and the relaxation of legal obstacles as the most important explanatory variables. The general improvement in the home economy and its future prospects are also important factors concerning the migration decision. The sharp fall in the pressure to migrate in the 1990s compared with the 1980s, despite unemployment and greater income differentiation is evidence of the importance of this factor, which in principle can be taken into account in the quantitative models. The role of such factors may also help to explain the relatively low rate of emigration from the south European countries (Greece, Portugal, Spain) after joining the EU, as well as the strong emigration pressure in the Balkan countries, which were unable to achieve sustainable growth during the 1990s.

Another factor, which helps to explain migration to the west, is the demand for foreign labour in spite of the difficult labour market situation in the receiving countries. There is a strong demand is for three types of migrant workers: (i) low-skilled workers (in agriculture, building and service sectors), which explains dual labour market developments (see below); (ii) people with average skills to work in the health and social assistance sector; and (iii) highly-skilled people, demanded by the high-technology sectors of the economy.

Impact of migrants on the labour market

In his very comprehensive and well-presented paper, Herbert Brücker examines the following four hypotheses on the impact of foreign workers on the labour market: (i) migration reduces domestic incomes; (ii) migration reduces the wages of natives; (iii) migration takes jobs away from natives; and (iv) migration reduces the welfare of natives.

The *first hypothesis* – that migration reduces domestic incomes in the host countries – is not confirmed. However, the actual impact depends essentially on the migrants' human capital characteristics. Total domestic income in the receiving countries increases, if the migrants have high skills, with the opposite in the source countries. The conclusion of the paper is that the gains are larger when there are greater complementarities between the skills of migrants and those of natives.

The paper suggests that the *second hypothesis* – that migration reduces the wages of natives in the host countries – is confirmed in the case of low-skilled employees. In reality, however, the connection between the number of low-skilled workers and wages is not so clear because in most of the EU host countries there is unemployment and wages are regulated through industrial bargaining. The model calculations show that the impact of a change in the immigration of manual workers on the wages of manual employees in the host countries is stronger while the reverse would be expected in the source country. Again, reality is sometimes different. In Poland, for instance, the relative wages of manual workers declined and those of non-manual workers increased. The reasons for this probably are some of the assumptions in the Brücker simulations: the EU candidate countries are now not only source countries but they are host countries as well.

The *third hypothesis* – that migration takes jobs away from natives – is a very sensitive political issue, but the empirical evidence is mixed as to the connection between the proportion of foreign citizens and the individual risk of becoming unemployed. This risk is different for various groups of employees and depends on the sectoral and regional density of foreign citizens. In the Brücker paper we can see also results of the simulation model, in which the findings refer not to individual employment but to the unemployment rate. The total unemployment rate in the host country increases by 0.4 percentage points if the share of the migrants in the labour force rises by 1 per cent. Concerning the likely future emigration from EEC that implies a small employment effect of immigration in Europe. As an upper benchmark, an annual immigration of 200,000 workers from the new EU members in the next 10-15 years would increase unemployment in Europe by about 0.54 percentage points in the first year after enlargement.[317]

The *fourth hypothesis* – that migration reduces the welfare of natives – is also a very sensitive political issue in the host countries. Welfare benefits are also important pull factors in the migration processes, but it is difficult to evaluate quantitatively how they affect the whole welfare situation in the host countries. The partial estimations reported in the paper suggest a negative impact on the income of native manual workers, which rises as the unemployment benefit and the share of migrants in the labour force increase.

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[316] Among the best known are the ones conducted by DIW and IAB consortium and that undertaken by the Ifo Institute with the cooperation of the Max Planck Institute. H. Brücker, "Die Folgen der Freizuegigkeit fuer die Ost – West – Migration, referat na konferencje naukową towarzystwa badawczych instytutów ekonomicznych (ARGE) na temat", *Migration in Europe*, (Berlin) 16-27 April 2001; H-W. Sinn (ed.), "EU-Erweiterung und Arbeitskräftemigration. Wege zu einer schrittweisen Annaerung der Arbeitsmaerkte", *Ifo Beiträge* (Munich), 2001.

[317] T. Bauer and K. Zimmermann, *Assessment of Possible Migration Pressure and its Labour Market Impact Following EU Enlargement to Central and Eastern Europe*, a study for the Department for Education and Employment (United Kingdom), 1999.

It should be noted that the hypothesis of state welfare loss due to migrants needs to be assessed in both the host and source countries. In the case of the CEE countries, from which income-generating emigration is mainly temporary, the loss of state welfare in the source countries is significant. There is some evidence that emigrants participate in the social security systems (health care, sickness allowances, disability pensions, etc.) of the source countries to a larger extent than non-emigrants but, at the same time, districts with the largest share of emigrants pay less tax.

In general, the assessment of the east-west migration on the labour markets in both parts of Europe presented in the paper, is only partly convincing. The new features of eastern migration have not yet been taken into consideration and the effects of migration on the CEE countries are not fully recognized.

Problems of regulating migration in the context of European enlargement

There are currently three scenarios for European migration policy under discussion: (i) status quo; (ii) selection according to human capital characteristics, and (iii) laissez-faire.

Practically, emigration from the CEE countries at present – *the status quo* – is subject to tight regulations, which are frequently changed. The objectives of regulation in the receiving countries are:

- To direct the inflow of foreign labour force to relatively labour-intensive sectors and low-productivity jobs, on the one hand, and to sectors threatened by skill shortages, on the other;
- To avoid foreign workers being underpaid in relation to native workers and hence to prevent a tendency of lowering the wages in the respective industry;[318]
- To limit the payment of welfare benefits in the receiving country, or at least to oblige immigrants to pay contributions and taxes for social security corresponding to those paid by native workers.

The selection of migrants by the receiving countries *according to their human capital* or skills is a response to labour demand in selected parts of the economy.[319] According to the theory of dual labour markets, the modern economy is always heterogeneous. The differentiation of economic development results in the differentiation of *demand* for labour with certain characteristics. Consequently, in every economy there are segments of the labour market where the employment of domestic workers declines regardless of the supply. Even with high unemployment rates, domestic workers reject some types of work.[320] Thus domestic workers avoid working in the more labour-intensive sectors because of the worse prospects for social and professional advancement. Foreign workers, by accepting these low-paid and low-prestige jobs contribute to economic equilibrium. Why do foreign workers accept such jobs? Their acceptance of the conditions offered in the receiving countries results mainly from the prospect of earnings, which are better than they can get at home. Accepting lower prestige is easier when the job is temporary and when it is out of sight of one's own countrymen. Eventually the migrant can return and with even more prestige as a result of his or her higher income and the acquisition of professional and personal experience.

Regulating migration in any form consists essentially in selective admittance to the labour markets of the receiving countries in order to solve specific problems of the latter. In the source countries with large labour resources there is a strong pressure to establish large quotas for economic emigration in order to achieve a short-term balance in the labour market. Regulations concerning migration, working conditions and wages in the host countries may lead to similar actions in the sending countries towards their new immigrants despite the economic interests of their own enterprises. Experience shows that strict regulation is invariably accompanied by the illegal employment of foreign workers, which leads not only to inappropriate labour and industrial relations but can also affect relations between nations as a result of prejudices, discrimination, etc.

When migration is a completely free process – *the laissez-faire scenario* – there is no state intervention in the process and, migration can benefit both the receiving and the source countries. In the sending country unemployment falls and wages grow. At the same time, new factors of economic growth appear through the income transfers of the workers abroad and their improved qualifications when they return home. In the receiving country the supply of labour rises, which reduces the growth of wages and increases the potential for capital investment. According to the classical theory, the migration process will stop when the payments for labour are equal in both countries; thus, migration is positive for both sides although the positive balance may only be evident in the long term.[321]

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[318] An increase of employment of foreign workers in a branch by 1 per cent is estimated to restrain the growth of wages in that branch by 0.6 per cent in Germany and 0.25 per cent in Austria. H. Hofer, "The impact of migration on host countries' wages and unemployment", in K. Pichelmann (ed.), *The Economic Consequences of Eastern Enlargement of the European Union. The Austrian View*, Institut fuer hoehere Studien (HIS) (Vienna), 1998; H. Brücker, op. cit.

[319] It should be pointed out that the status quo scenario is in fact also equivalent to regulation of migrants according to their human capital characteristics. However, in the 1990s, legal migrations (seasonal and contractual workers) mostly concerned low-skilled workers.

[320] M. Piore, *Birds of Passage: Migrant Labor in Industrial Societies* (Cambridge, Cambridge University Press, 1979).

[321] B. Ghosh, "Economic migration and the sending countries", in J. vanden Broeck (ed.), *The Economics of Labour Migration* (Cheltenham, Edward Elgar, 1996), pp. 77-113.

5.B Georg Fischer

I agree with the paper that the available empirical evidence points to clearly positive economic benefits and only a limited impact of migration on labour markets in host countries. Indeed, many studies have shown that often there is complementarity rather than substitution between the employment of immigrants and the domestic labour force. Further, migration can help to relieve bottlenecks in specific sectors.

Brücker's paper, however, omits to stress the importance of maintaining social cohesion and the associated need to strive for the social inclusion and economic integration of migrants. Currently, there are very substantial differences between the employment and unemployment rates of EU citizens and non-EU citizens. The employment rate of EU citizens amounts to 64.2 per cent, that of non-EU citizens to only 52.3 per cent; and unemployment of non-EU citizens was twice as high as that for EU citizens: 7.4 per cent versus 15.7 per cent, respectively, in 2001. The relatively low employment rate of highly-skilled non-EU citizens is of particular concern against the background of growing complaints about skill shortages, often voiced in the service sectors and education and in manufacturing and technical occupations. While the employment rate for highly-skilled EU nationals is about 83 per cent, for non-EU nationals it is a mere 66 per cent. The unemployment rate for highly-skilled EU nationals is 4.3 per cent as opposed to 12.9 per cent for non-EU nationals. This raises serious questions about how enterprises and more generally the domestic economy welcome immigrants. This is also shown by the large concentration of migrants in stagnant sectors characterized by low value added, low barriers to entry and low capital intensity. This context is also one where the opportunities for unrecorded economic activities are greater, with clear economic losses for the economy.

These matters could be addressed through a social inclusion policy. This would require in particular giving immigrants full access to training and education, including in the host country language. The latter, in particular, plays a pivotal role for social and economic integration. Available evidence points to women and older workers being less likely to be proficient in the language of the host country. This is all the more important as language proficiency plays an important role in helping migrants to acquire other job specific, or country specific, skills and information, which are required to make full use of their economic potential, as well as reducing wage disparities over time.

This is also an important issue for the host country population, reflected in the fact that concerns about social inclusion (or, rather, exclusion) tend to be at least as important as worries about the perceived negative economic implications of migration. Moreover it fits into the overall emphasis in the EU on social inclusion as a general policy principle independent of specific target groups. The role of existing migrant communities as vehicles for integration of new migrants in this respect has not been appropriately addressed, while the available evidence points to the crucial role that these groups play in diffusing local labour market information and providing a support network for newly arrived migrants.

Another central issue which policy needs to address is the lack of awareness by host country populations of the general economic benefits of immigration. These range from consumption effects, such as increases in the demand for goods and services produced by the host country (particularly those with a high-income elasticity), to increases in the number and type of goods available and the possibility of developing new comparative advantages, to improvements in the efficiency of resource allocation when domestic labour is not very mobile. They also include, as highlighted by Brücker, the likely positive impact of migrants, given their age structure, in terms of their contributions to the social security system and the overall fiscal system.

In contrast, the terms of the debate have been set around the limited negative effects (e.g. job losses) which affect certain groups of the population such as the low skilled and which are more easily associated with migration, especially by those looking for jobs even if the relationship is far from clear. A Eurobarometer survey, for example, found that the opinion that there were too many foreigners declined strongly with higher educational levels, and, more moderately, with higher income levels. This underlines the point that policy makers have an important responsibility in addressing the immigration issue in a balanced and broad manner.

PART THREE

STATISTICAL APPENDIX

For the user's convenience, as well as to lighten the text, the *Economic Survey of Europe* includes a set of appendix tables showing time series for the main economic indicators over a longer period. The data are presented in two sections, following the structure of the text: *Appendix A* provides macroeconomic indicators for the market economies in western Europe, North America and Japan for 1987-2001, *Appendix B* does the same for the east European countries, the Baltic states and the Commonwealth of Independent States for 1980-2001.

Re-estimated historical series are not yet available for all the transition economies, and longer time series could in some instances be obtained only by splicing older data with the new statistics (as explained in the notes to the tables). Historical series for Czechoslovakia, the former SFR of Yugoslavia and the Soviet Union can be found in previous issues of this *Survey*. For the economies of western Europe and North America data for the more recent years may also be subject to revision as more comprehensive benchmark figures become available.

Data were compiled from international and national statistical sources. Details on recent changes in national accounts methodology were provided in chapter 7 of the *Economic Survey of Europe, 2000 No. 1*. Aggregates are UNECE secretariat calculations, using PPPs obtained from the 1996 European Comparison Programme. Greece has become a member of the euro area at the beginning of 2001. In order to ensure continuity of time series and comparability with the text tables, Greece has been included in the euro area aggregates for all years shown in the appendix tables.

The figures for 2001 are based on data available in early October 2002.

APPENDIX TABLE A.1

Real GDP in western Europe, North America and Japan, 1987-2001

(Percentage change over preceding year)

	1987	*1988*	*1989*	*1990*	*1991*	*1992*	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*	*1999*	*2000*	*2001*
France [a]	2.5	4.6	4.2	2.6	1.0	1.5	-0.9	2.1	1.7	1.1	1.9	3.4	3.2	3.8	1.8
Germany [b]	1.7	3.7	3.5	3.2	2.8	2.2	-1.1	2.3	1.7	0.8	1.4	2.0	2.0	2.9	0.6
Italy	3.0	3.9	2.9	2.0	1.4	0.8	-0.9	2.2	2.9	1.1	2.0	1.8	1.6	2.9	1.8
Austria	1.6	3.4	4.2	4.7	3.3	2.3	0.4	2.6	1.6	2.0	1.6	3.5	2.8	3.0	1.0
Belgium	2.3	4.7	3.5	3.1	1.8	1.5	-1.0	3.2	2.4	1.2	3.6	2.2	3.0	4.0	1.0
Finland	4.2	4.7	5.1	–	-6.3	-3.3	-1.1	4.0	3.8	4.0	6.3	5.3	4.1	6.1	0.7
Greece	-2.3	4.3	3.8	–	3.1	0.7	-1.6	2.0	2.1	2.4	3.6	3.4	3.6	4.2	4.1
Ireland	4.7	5.2	5.8	8.5	1.9	3.3	2.7	5.8	10.0	7.8	10.8	8.6	10.8	11.5	5.9
Luxembourg	2.3	10.4	9.8	2.0	4.6	3.7	4.1	3.8	3.2	3.6	9.0	5.8	6.0	7.5	3.5
Netherlands	1.4	3.0	5.0	4.1	2.5	1.7	0.9	2.6	3.0	3.0	3.8	4.3	4.0	3.3	1.3
Portugal	6.4	7.5	6.4	4.0	4.4	1.1	-2 0	1.0	4.3	3.5	3.9	4.5	3.5	3.5	1.7
Spain	5.5	5.1	4.8	3.8	2.5	0.9	-1.0	2.4	2.8	2.4	4.0	4.3	4.1	4.1	2.8
Euro area [c]	2.6	4.2	3.9	2.9	2.0	1.5	-0.8	2.3	2.3	1.5	2.4	2.9	2.8	3.5	1.6
United Kingdom	4.5	5.2	2.2	0.8	-1.4	0.2	2.5	4.7	2.9	2.6	3.4	2.9	2.4	3.1	1.9
Denmark	–	1.2	0.2	1.0	1.1	0.6	–	5.5	2.8	2.5	3.0	2.5	2.3	3.0	1.0
Sweden [a]	3.3	2.6	2.7	1.1	-1.1	-1.7	-1.8	4.1	3.7	1.1	2.1	3.6	4.5	3.6	1.2
European Union [d]	2.8	4.3	3.5	2.5	1.4	1.2	-0.3	2.8	2.5	1.7	2.6	2.9	2.8	3.4	1.6
Cyprus	7.0	8.5	7.9	7.4	0.6	9.8	0.7	5.9	6.1	1.9	2.4	5.0	4.6	5.1	4.0
Iceland	8.5	-0.1	0.3	1.2	0.7	-3.3	0.6	4.5	0.1	5.2	4.6	5.3	3.9	5.0	1.5
Israel [a]	6.2	3.4	1.4	6.3	5.7	6.8	3.4	6.9	8.3	4.5	3.3	2.7	2.6	6.4	-0.5
Malta	4.1	8.4	8.2	6.3	6.3	4.7	4.5	5.7	6.2	4.0	4.8	3.4	4.1	5.4	-0.3
Norway [a]	2.0	-0.1	0.9	2.0	3.8	3.3	2.7	5.3	4.4	5.3	5.2	2.6	2.1	2.4	1.4
Switzerland	0.7	3.1	4.3	3.7	-0.8	-0.1	-0.5	0.5	0.5	0.3	1.7	2.4	1.5	3.2	0.9
Turkey	9.5	2.1	0.3	9.3	0.9	6.0	8.0	-5.5	7.2	7.0	7.5	3.1	-4.7	7.2	-7.4
Western Europe	3.0	4.1	3.4	2.8	1.3	1.4	–	2.4	2.6	1.9	2.8	2.9	2.4	3.6	1.2
Canada [a]	4.3	5.0	2.6	0.2	-2.1	0.9	2.3	4.8	2.8	1.6	4.2	4.1	5.4	4.5	1.5
United States [a]	3.4	4.2	3.5	1.8	-0.5	3.0	2.7	4.0	2.7	3.6	4.4	4.3	4.1	3.8	0.3
North America	3.5	4.2	3.4	1.6	-0.6	2.9	2.6	4.1	2.7	3.4	4.4	4.3	4.2	3.8	0.4
Japan	4.5	6.5	5.3	5.3	3.1	0.9	0.4	1.0	1.6	3.5	1.8	-1.1	0.7	2.4	-0.5
Total above	3.4	4.5	3.7	2.7	0.8	1.9	1.2	2.9	2.5	2.8	3.4	2.9	3.0	3.5	0.6
Memorandum items:															
4 major west European economies [e]	2.8	4.3	3.2	2.3	1.2	1.3	-0.3	2.7	2.2	1.3	2.1	2.5	2.3	3.1	1.4
Western Europe and North America	3.2	4.2	3.4	2.2	0.4	2.1	1.3	3.3	2.7	2.7	3.6	3.6	3.3	3.7	0.8

Source: Eurostat, New Cronos Database; OECD, *National Accounts* (Paris), various issues; national statistics.

Note: All aggregates exclude Israel. Growth rates of regional aggregates have been calculated from constant price series, base 2000. (These were computed by summing over all participant countries of the national series re-scaled to the price level of the common reference year 2000 and then converted into dollars using 2000 purchasing power parities of GDP.)

[a] Annual changes are calculated from chained national currency series.

[b] West Germany, 1987-1991.

[c] Twelve countries above.

[d] Fifteen countries above.

[e] France, Germany, Italy and the United Kingdom.

APPENDIX TABLE A.2

Real private consumption expenditure in western Europe, North America and Japan, 1987-2001

(Percentage change over preceding year)

	1987	*1988*	*1989*	*1990*	*1991*	*1992*	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*	*1999*	*2000*	*2001*
France [a]	3.0	2.7	3.0	2.7	0.7	0.9	-0.4	1.2	1.2	1.3	0.2	3.4	3.2	2.5	2.6
Germany [b]	3.4	2.7	2.8	5.4	5.6	2.7	0.1	1.1	2.1	1.0	0.6	1.8	3.7	1.4	1.5
Italy	3.8	4.0	3.7	2.1	2.9	1.9	-3.7	1.5	1.7	1.2	3.2	3.2	2.4	2.7	1.1
Austria	2.6	3.1	4.3	4.5	2.5	3.0	0.8	2.4	2.6	3.2	1.7	2.8	2.7	2.5	1.3
Belgium	1.7	3.3	3.3	3.2	3.0	1.9	-0.4	2.4	1.7	1.2	2.0	2.9	2.1	3.8	1.6
Finland	5.1	5.3	4.6	-0.6	-3.8	-4.4	-3.1	2.6	4.4	4.2	3.5	5.1	4.0	2.6	1.1
Greece	2.7	6.1	6.3	2.6	2.9	2.3	-0.8	1.9	2.5	2.4	2.7	3.5	2.9	3.3	3.2
Ireland	3.3	4.5	6.5	1.4	1.8	2.9	2.9	4.4	4.1	6.4	7.4	7.3	8.3	10.0	4.8
Luxembourg	4.6	4.6	5.1	1.8	6.6	0.9	-2.7	3.6	1.3	3.6	3.6	4.0	2.7	3.5	4.8
Netherlands	2.7	0.6	3.3	3.9	2.7	0.8	0.5	0.9	3.0	4.0	3.0	4.8	4.7	3.6	1.2
Portugal	5.3	6.8	2.9	6.4	4.2	4.7	1.1	1.0	0.6	3.0	3.3	5.1	4.8	2.6	0.9
Spain	6.0	4.9	5.4	3.5	2.9	2.2	-1.9	1.1	1.7	2.2	3.2	4.5	4.7	4.0	2.7
Euro area [c]	3.6	3.4	3.6	3.6	3.2	2.0	-1.0	1.3	1.9	1.6	1.8	3.1	3.5	2.6	1.8
United Kingdom	5.3	7.5	3.3	1.0	-1.5	0.6	3.2	3.3	1.9	3.8	3.8	3.8	4.5	5.2	4.1
Denmark	-2.2	-2.1	-0.1	0.1	1.6	1.9	0.5	6.5	1.2	2.5	2.9	2.3	0.2	-0.3	0.8
Sweden [a]	5.3	2.6	1.2	-0.4	1.0	-1.3	-3.0	1.8	0.6	1.4	2.0	2.7	3.9	4.5	0.2
European Union [d]	3.8	4.0	3.4	3.0	2.3	1.7	-0.4	1.7	1.8	2.0	2.1	3.2	3.6	3.1	2.2
Cyprus	5.5	10.5	6.9	9.0	9.9	3.2	-4.8	5.0	10.3	3.7	4.1	8.6	4.6	8.0	4.0
Iceland	16.2	-3.8	-4.2	0.5	2.9	-3.1	-4.7	2.9	2.2	5.4	5.1	10.4	7.2	4.2	-1.2
Israel [a]	8.9	4.5	0.4	5.6	7.2	8.0	7.3	9.5	5.8	5.2	3.9	4.3	3.2	6.6	3.1
Malta	0.5	9.0	9.2	3.8	3.8	4.3	0.8	2.3	10.5	7.1	1.6	2.5	6.1	6.7	2.5
Norway [a]	-0.8	-2.0	-0.6	0.7	2.5	2.2	2.4	3.3	3.7	6.5	3.2	2.7	3.3	3.5	2.5
Switzerland	1.8	1.4	2.7	1.0	1.9	–	-1.7	0.5	-0.4	0.3	1.8	2.6	2.3	2.2	1.8
Turkey	-0.3	1.2	-1.0	13.1	2.7	3.2	8.6	-5.4	4.8	8.5	8.4	0.6	-2.6	6.4	-9.0
Western Europe	3.5	3.7	3.2	3.3	2.3	1.7	–	1.4	2.0	2.3	2.5	3.1	3.3	3.2	1.6
Canada [a]	4.2	4.3	3.4	1.2	-1.6	1.5	1.8	3.0	2.1	2.6	4.6	2.8	3.9	3.7	2.6
United States [a]	3.3	4.0	2.7	1.8	-0.2	2.9	3.4	3.8	3.0	3.2	3.6	4.8	4.9	4.3	2.5
North America	3.4	4.1	2.7	1.8	-0.3	2.8	3.2	3.7	2.9	3.1	3.6	4.6	4.9	4.3	2.5
Japan	4.1	5.1	4.7	4.4	2.7	2.6	1.8	2.6	1.4	2.4	0.8	0.1	1.2	0.6	0.3
Total above	3.5	4.1	3.2	2.8	1.2	2.3	1.7	2.6	2.3	2.7	2.8	3.4	3.7	3.4	1.9
Memorandum items:															
4 major west European economies [e]	3.8	4.1	3.2	3.0	2.3	1.7	-0.2	1.7	1.8	1.8	1.9	2.9	3.5	2.8	2.3
Western Europe and North America	3.5	3.9	2.9	2.5	1.0	2.3	1.7	2.6	2.5	2.8	3.1	3.9	4.1	3.8	2.1

Source: Eurostat, New Cronos Database; OECD, *National Accounts* (Paris), various issues; national statistics.

Note: See appendix table A.1.

[a] Annual changes are calculated from chained national currency series.

[b] West Germany, 1987-1991.

[c] Twelve countries above.

[d] Fifteen countries above.

[e] France, Germany, Italy and the United Kingdom.

APPENDIX TABLE A.3

Real general government consumption expenditure in western Europe, North America and Japan, 1987-2001

(Percentage change over preceding year)

	1987	*1988*	*1989*	*1990*	*1991*	*1992*	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*	*1999*	*2000*	*2001*
France[a]	2.2	3.2	1.6	2.5	2.7	3.8	4.6	0.7	-0.1	2.3	2.1	-0.1	2.0	2.2	2.5
Germany[b]	2.1	2.2	-1.3	2.3	0.8	5.0	0.1	2.4	1.5	1.8	0.3	1.9	1.0	1.2	0.8
Italy	4.8	4.0	0.2	2.5	1.7	0.6	-0.2	-0.9	-2.2	1.0	0.2	0.2	1.3	1.7	2.2
Austria	0.1	1.1	1.7	2.3	3.2	3.5	3.7	3.0	1.3	1.2	-1.5	2.8	2.2	0.9	-0.2
Belgium	2.6	-0.7	1.1	-0.4	3.6	1.4	-0.2	1.4	1.3	2.4	0.3	1.5	3.2	2.5	2.3
Finland	4.4	1.9	2.2	4.0	2.1	-2.4	-4.2	0.3	1.9	2.5	4.1	1.7	1.9	-0.2	2.1
Greece	0.2	-5.5	5.4	0.6	-1.5	-3.0	2.6	-1.1	5.6	0.9	3.0	1.7	0.9	0.7	1.8
Ireland	-4.8	-5.0	-1.3	5.4	2.7	3.0	0.1	4.1	3.9	3.3	5.3	5.7	6.3	5.4	5.3
Luxembourg	4.7	4.9	3.9	0.5	4.0	3.2	1.4	1.5	2.4	5.5	3.0	1.4	7.2	4.4	7.8
Netherlands	2.8	1.8	1.9	2.2	3.0	2.9	1.6	1.5	1.5	-0.4	3.2	3.6	2.5	1.9	3.1
Portugal	3.8	8.6	6.4	4.2	9.6	-0.9	-0.2	4.3	1.0	3.4	2.2	4.1	5.0	3.3	2.4
Spain	9.2	3.6	8.3	6.3	6.0	3.5	2.7	0.5	2.4	1.3	2.9	3.7	4.2	4.0	3.1
Euro area[c]	3.1	2.6	1.1	2.7	2.4	2.9	1.4	1.1	0.6	1.6	1.3	1.5	2.0	2.0	2.0
United Kingdom	–	0.2	1.0	2.2	3.0	0.7	-0.7	1.0	1.7	1.2	0.1	1.5	3.1	2.1	2.2
Denmark	2.1	-0.2	-0.8	-0.2	0.6	0.8	4.1	3.0	2.1	3.4	0.8	3.1	1.8	0.6	1.2
Sweden[a]	1.2	1.1	3.0	2.5	3.4	0.2	-0.1	-0.9	-0.6	0.9	-1.2	3.2	1.7	-0.9	1.4
European Union[d]	2.5	2.1	1.1	2.5	2.5	2.4	1.1	1.0	0.7	1.6	1.0	1.6	2.1	1.9	2.0
Cyprus	5.3	10.5	1.9	17.4	3.9	13.8	-14.3	4.1	2.9	11.7	3.7	6.4	-3.6	2.7	9.7
Iceland	6.5	4.7	3.0	4.4	3.1	-0.7	2.3	4.0	1.8	1.2	2.5	3.4	5.1	3.7	3.7
Israel[a]	18.3	-2.5	-8.6	7.7	4.1	1.4	4.2	-0.2	1.8	5.3	1.8	2.4	3.1	1.1	3.2
Malta	9.1	6.0	12.7	5.7	10.9	8.9	6.0	6.4	8.5	8.4	-1.1	-4.0	-0.6	5.2	3.3
Norway[a]	4.6	-0.1	1.9	4.9	6.2	5.6	2.7	1.5	1.5	3.1	2.5	3.3	3.2	1.2	2.0
Switzerland	1.7	4.5	5.4	5.4	3.5	0.7	-0.1	2.0	-0.1	2.0	–	1.3	1.2	1.5	2.6
Turkey	9.4	-1.1	0.8	8.0	3.7	3.6	8.6	-5.5	6.8	8.6	4.1	7.8	6.5	7.1	-8.6
Western Europe	2.7	2.1	1.2	2.7	2.6	2.5	1.3	0.9	0.9	1.8	1.1	1.8	2.2	2.0	1.7
Canada[a]	1.3	4.6	2.8	3.5	2.9	1.0	–	-1.2	-0.6	-1.2	-1.0	3.2	1.9	2.3	3.3
United States[a e]	3.0	1.2	2.8	3.3	1.2	0.5	-0.8	0.1	0.4	1.1	2.4	1.9	3.9	2.7	3.7
North America	2.8	1.5	2.8	3.3	1.3	0.5	-0.7	–	0.4	0.9	2.1	2.0	3.7	2.7	3.6
Japan	3.5	3.4	2.9	2.5	3.2	2.7	3.2	2.9	4.3	2.8	1.3	1.9	4.5	4.6	3.1
Total above	2.8	1.9	2.1	3.0	2.1	1.6	0.6	0.7	1.0	1.5	1.5	1.9	3.1	2.6	2.7
Memorandum items:															
4 major west European economies[f]	2.2	2.4	0.2	2.4	2.0	2.8	1.0	1.0	0.3	1.6	0.7	0.9	1.8	1.8	1.8
Western Europe and North America	2.8	1.8	2.0	3.0	1.9	1.5	0.3	0.4	0.6	1.3	1.6	1.9	3.0	2.3	2.6

Source: Eurostat, New Cronos Database; OECD, *National Accounts* (Paris), various issues; national statistics.

Note: See appendix table A.1.

[a] Annual changes are calculated from chained national currency series.

[b] West Germany, 1987-1991.

[c] Twelve countries above.

[d] Fifteen countries above.

[e] Includes final consumption expenditure and gross investment.

[f] France, Germany, Italy and the United Kingdom.

APPENDIX TABLE A.4

Real gross domestic fixed capital formation in western Europe, North America and Japan, 1987-2001

(Percentage change over preceding year)

	1987	*1988*	*1989*	*1990*	*1991*	*1992*	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*	*1999*	*2000*	*2001*
France[a]	6.0	9.5	7.3	3.3	-1.5	-1.6	-6.4	1.5	2.0	–	-0.1	7.0	6.2	6.1	2.8
Germany[b]	2.5	4.6	5.6	9.0	9.8	4.5	-4.4	4.0	-0.6	-0.8	0.6	3.0	4.1	2.5	-5.3
Italy	4.2	6.7	4.2	4.0	1.0	-1.4	-10.9	0.1	6.0	3.6	2.1	4.0	5.7	6.5	2.4
Austria	3.8	7.4	4.1	6.2	6.6	0.6	-0.9	4.6	1.3	2.2	2.0	3.4	1.5	5.1	-1.5
Belgium	4.9	16.1	11.6	8.6	-4.2	1.0	-2.5	0.4	3.4	1.3	6.8	4.3	3.3	2.6	0.3
Finland	4.9	11.0	13.0	-4.6	-18.6	-16.7	-16.6	-2.7	10.6	8.4	11.9	9.3	3.0	3.9	4.0
Greece	-5.6	2.6	6.1	4.5	4.2	-3.5	-4.0	-3.1	4.1	8.4	6.8	10.6	6.2	7.8	7.4
Ireland	-1.1	5.2	10.1	13.4	-7.0	–	-5.1	11.8	13.4	16.6	17.8	15.7	13.5	7.3	0.4
Luxembourg	17.9	15.0	7.0	7.6	15.5	-2.2	7.0	-8.8	6.5	1.7	14.3	2.8	21.9	-5.9	3.3
Netherlands	0.8	5.3	5.1	2.5	0.4	0.7	-3.2	2.1	3.9	6.3	6.6	4.2	7.8	3.5	-0.8
Portugal	18.0	14.8	3.7	7.6	3.3	4.5	-5.5	2.7	6.6	5.7	13.9	11.5	7.3	4.7	0.1
Spain	12.2	13.6	12.0	6.5	1.7	-4.1	-8.9	1.9	7.7	2.1	5.0	9.7	8.8	5.7	2.5
Euro area[c]	4.7	7.8	6.7	5.7	2.7	0.1	-6.4	2.1	3.0	1.7	2.8	5.5	5.8	4.7	-0.1
United Kingdom	9.3	14.9	6.0	-2.6	-8.2	-0.9	0.3	4.7	3.1	4.7	6.9	12.8	0.6	1.9	-0.4
Denmark	-0.8	-3.2	-0.6	-2.2	-3.4	-2.1	-3.8	7.7	11.6	3.9	10.9	10.0	1.0	10.7	–
Sweden[a]	8.0	6.4	12.1	0.2	-8.6	-11.6	-15.0	6.1	9.4	5.0	-1.1	8.5	9.6	5.0	1.5
European Union[d]	5.2	8.5	6.6	4.3	1.0	-0.3	-5.8	2.6	3.2	2.2	3.3	6.6	5.0	4.4	-0.1
Cyprus	4.5	10.6	20.0	-2.8	-1.6	16.2	-12.8	-2.5	-1.7	7.4	-4.5	2.4	-0.1	7.0	3.4
Iceland	18.8	-0.2	-7.9	3.0	3.3	-11.1	-10.7	0.6	-1.1	25.7	10.0	29.2	-2.5	12.7	-5.5
Israel[a]	6.1	1.6	-2.2	25.3	41.9	5.2	5.3	8.4	6.6	9.0	-0.9	-3.6	0.4	1.1	-8.9
Malta	30.7	6.1	1.0	17.9	–	-0.2	11.1	8.5	17.8	-8.4	-4.5	-3.4	4.0	18.1	-13.7
Norway[a]	0.3	-1.8	-6.9	-10.8	-8.5	-1.1	6.5	5.3	3.9	10.3	15.5	13.1	-5.6	-1.5	-4.6
Switzerland	4.0	8.1	5.3	3.8	-2.9	-6.6	-2.7	6.5	1.8	-2.4	1.5	4.5	2.7	5.8	-5.2
Turkey	45.1	-1.0	2.2	15.9	0.4	6.4	26.4	-16.0	9.1	14.1	14.8	-3.9	-15.7	16.5	-31.7
Western Europe	6.2	7.9	6.2	4.5	0.7	-0.2	-4.3	1.7	3.4	2.7	4.0	6.0	3.8	4.9	-1.7
Canada[a]	10.5	9.4	5.6	-4.0	-5.5	-2.7	-2.0	7.5	-2.1	4.4	15.2	2.4	7.8	6.5	1.7
United States[a e]	...	3.6	2.7	-1.8	-6.9	6.5	8.1	9.1	6.1	9.3	9.6	11.4	7.8	6.1	-3.8
North America	...	4.3	3.1	-2.1	-6.8	5.3	6.9	9.0	5.2	8.8	10.1	10.5	7.8	6.1	-3.3
Japan	9.4	12.0	8.6	8.8	2.2	-2.5	-3.1	-1.4	0.3	6.8	1.0	-4.0	-0.8	3.2	-1.8
Total above	...	7.6	5.8	3.5	-1.1	0.7	-0.8	3.2	3.3	5.6	5.4	5.5	4.4	5.0	-2.3
Memorandum items:															
4 major west European economies[f]	4.9	8.1	5.8	4.3	1.8	0.9	-5.6	2.7	2.0	1.3	1.9	5.9	4.2	4.0	-0.8
Western Europe and North America	...	6.4	5.0	1.9	-2.1	1.8	-0.1	4.6	4.2	5.3	6.7	8.1	5.6	5.4	-2.5

Source: Eurostat, New Cronos Database; OECD, *National Accounts* (Paris), various issues; national statistics.

Note: See appendix table A.1.

[a] Annual changes are calculated from chained national currency series.

[b] West Germany, 1987-1991.

[c] Twelve countries above.

[d] Fifteen countries above.

[e] Includes only gross domestic fixed investment of the private sector; the government sector gross investment is included in the final consumption expenditure of general government.

[f] France, Germany, Italy and the United Kingdom.

APPENDIX TABLE A.5

Real total domestic expenditures in western Europe, North America and Japan, 1987-2001

(Percentage change over preceding year)

	1987	*1988*	*1989*	*1990*	*1991*	*1992*	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*	*1999*	*2000*	*2001*
France[a]	3.2	4.7	3.9	2.8	0.5	0.8	-1.6	2.1	1.6	0.7	0.7	4.0	3.6	4.0	1.7
Germany[b]	2.6	3.6	2.7	4.8	6.2	2.8	-1.1	2.3	1.7	0.3	0.6	2.4	2.8	1.8	-0.8
Italy	4.3	4.1	3.1	2.7	2.1	0.9	-5.1	1.7	2.0	0.9	2.7	3.1	3.0	2.1	1.6
Austria	2.4	3.3	3.7	4.4	3.5	2.3	0.6	3.5	2.6	1.9	1.5	2.7	2.8	2.5	0.1
Belgium	3.1	4.9	4.1	3.3	1.6	1.7	-0.9	2.3	1.6	0.9	2.8	3.3	2.2	3.8	0.8
Finland	5.7	6.6	7.0	-0.5	-7.9	-5.7	-5.5	3.2	3.2	4.1	4.7	4.8	2.8	2.9	2.0
Greece	-2.7	5.9	5.3	2.2	3.5	-0.5	-1.0	1.1	3.5	3.3	3.5	4.6	2.8	4.0	3.5
Ireland	-0.4	1.9	6.9	6.3	0.2	-0.1	1.0	5.1	6.7	7.4	9.4	10.3	6.6	9.2	4.6
Luxembourg	5.3	6.5	8.0	2.9	8.7	3.7	-0.2	1.0	2.9	4.0	6.7	3.0	8.4	3.2	3.8
Netherlands	1.4	2.2	5.0	3.4	2.2	1.2	-1.6	2.0	3.5	2.8	3.9	4.8	4.3	2.7	1.4
Portugal	9.0	10.1	4.9	5.3	6.1	3.4	-2.1	1.5	4.1	3.0	5.1	6.7	5.6	3.0	0.9
Spain	7.9	6.8	7.3	4.6	3.0	1.0	-3.3	1.5	3.1	1.9	3.5	5.7	5.6	4.2	2.8
Euro area[c]	3.6	4.4	3.9	3.6	3.0	1.5	-2.3	2.0	2.2	1.1	2.0	3.7	3.5	2.9	1.1
United Kingdom	4.9	8.1	2.9	-0.3	-2.5	0.9	2.3	3.8	2.0	3.1	3.9	5.0	3.6	3.9	2.4
Denmark	-2.0	0.2	-0.1	-0.7	-0.1	0.9	-0.3	7.0	4.2	2.2	4.9	4.0	-0.5	2.6	1.1
Sweden[a]	4.3	3.0	4.0	0.7	-1.6	-1.8	-4.6	3.1	1.9	0.7	0.8	4.3	3.5	3.5	0.3
European Union[d]	3.7	4.9	3.7	2.9	2.0	1.3	-1.7	2.4	2.2	1.4	2.3	3.9	3.5	3.1	1.3
Cyprus	5.6	11.3	9.7	6.3	5.1	9.3	-9.5	7.4	7.8	3.4	2.1	9.1	0.8	5.8	4.1
Iceland	15.7	-0.7	-4.4	1.5	4.6	-4.6	-4.2	2.4	2.2	7.3	5.5	13.2	4.3	-8.0	-1.7
Israel[a]	9.0	2.5	-2.8	9.3	12.1	5.3	6.8	5.3	6.7	5.7	2.0	1.2	4.9	3.4	1.3
Malta	3.5	11.5	8.3	7.6	4.9	0.1	4.8	5.9	9.5	2.8	-0.1	-1.1	5.8	10.6	-4.8
Norway[a]	-0.6	-2.5	-1.6	–	0.7	2.2	3.2	4.2	4.6	4.4	6.7	5.7	0.3	2.5	-0.3
Switzerland	1.8	2.4	4.3	3.8	-0.5	-2.8	-1.5	2.3	1.2	0.2	1.5	4.4	1.4	3.0	1.2
Turkey	7.6	-1.0	1.1	14.3	-0.1	5.3	13.4	-11.5	10.4	7.8	8.9	0.7	-3.4	9.1	-19.4
Western Europe	3.7	4.5	3.6	3.3	1.8	1.4	-1.0	1.8	2.5	1.7	2.6	3.8	3.1	3.3	0.3
Canada[a]	4.9	5.4	4.1	-0.3	-1.9	0.5	1.5	3.3	1.8	1.3	6.1	2.5	4.3	4.4	1.1
United States[a]	3.7	3.2	2.9	1.4	-1.1	3.1	3.2	4.4	2.4	3.7	4.7	5.5	5.0	4.4	0.2
North America	3.8	3.4	3.0	1.3	-1.1	2.9	3.0	4.3	2.4	3.5	4.8	5.2	5.0	4.4	0.3
Japan	5.3	7.3	5.6	5.3	2.7	0.6	0.3	1.2	2.1	4.0	0.9	-1.5	0.8	1.9	0.2
Total above	4.0	4.4	3.6	2.7	0.7	1.9	0.9	2.8	2.4	2.8	3.3	3.7	3.6	3.6	0.3
Memorandum items:															
4 major west European economies[e]	3.6	4.9	3.1	2.7	2.1	1.5	-1.5	2.4	1.8	1.1	1.8	3.5	3.2	2.9	1.0
Western Europe and North America	3.8	3.9	3.3	2.3	0.4	2.1	1.0	3.0	2.4	2.6	3.7	4.5	4.0	3.9	0.3

Source: Eurostat, New Cronos Database; OECD, *National Accounts* (Paris), various issues; national statistics.

Note: See appendix table A.1.

[a] Annual changes are calculated from chained national currency series.

[b] West Germany, 1987-1991.

[c] Twelve countries above.

[d] Fifteen countries above.

[e] France, Germany, Italy and the United Kingdom.

APPENDIX TABLE A.6

Real exports of goods and services in western Europe, North America and Japan, 1987-2001

(Percentage change over preceding year)

	1987	*1988*	*1989*	*1990*	*1991*	*1992*	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*	*1999*	*2000*	*2001*
France [a]	3.4	8.7	10.0	4.8	5.9	5.4	–	7.7	7.7	3.5	11.8	8.3	4.3	12.7	0.5
Germany [b]	0.5	5.1	9.8	0.5	-2.9	-0.8	-5.5	7.6	5.7	5.1	11.2	7.0	5.6	13.7	5.0
Italy	4.5	5.1	7.8	7.5	-1.4	7.3	9.0	9.8	12.6	0.6	6.4	3.4	0.3	11.7	0.8
Austria	2.3	9.8	9.7	7.8	5.2	1.5	-1.4	5.6	3.0	5.2	12.4	7.9	8.7	12.2	5.5
Belgium	5.0	9.6	8.3	4.6	3.1	3.6	-0.4	8.4	5.2	2.9	6.1	5.8	5.0	9.7	-1.0
Finland	2.9	3.5	1.6	1.2	-7.3	10.3	16.7	13.1	8.6	5.8	14.1	8.9	6.8	20.1	-2.2
Greece	5.9	-2.1	1.9	-3.5	4.1	10.0	-2.6	7.4	3.0	3.5	20.0	5.3	8.0	19.7	-1.3
Ireland	13.7	9.0	10.3	8.7	5.7	13.9	9.7	15.1	20.0	12.2	17.4	21.4	15.7	17.8	8.4
Luxembourg	4.4	11.7	8.1	4.2	4.3	-1.0	7.8	5.9	4.0	5.5	13.4	13.8	12.3	17.0	2.5
Netherlands	4.1	8.9	7.9	5.0	5.6	2.4	5.7	9.7	8.8	4.6	8.8	7.4	5.1	10.9	1.7
Portugal	11.2	8.2	12.2	9.5	1.2	3.2	-3.3	8.4	8.8	7.1	7.1	9.1	3.2	8.4	2.9
Spain	5.3	3.8	1.4	4.7	8.2	7.5	7.8	16.7	9.4	10.4	15.3	8.2	7.6	9.6	3.4
Euro area [c]	3.2	6.5	8.4	3.9	1.5	3.5	1.3	9.1	8.1	4.4	10.4	7.2	5.2	12.4	2.5
United Kingdom	6.1	0.6	4.5	5.4	-0.1	4.3	4.4	9.2	9.0	8.2	8.3	3.0	5.3	10.1	1.4
Denmark	4.3	11.2	4.2	6.2	6.1	-0.9	-1.5	7.0	2.9	4.3	4.1	4.3	10.8	11.5	3.7
Sweden [a]	4.3	2.8	3.2	1.8	-1.9	2.2	8.3	14.1	11.3	3.5	13.7	8.4	6.5	10.3	-1.4
European Union [d]	3.7	5.7	7.7	4.1	1.3	3.4	1.8	9.2	8.2	4.9	10.1	6.7	5.3	12.1	2.3
Cyprus	13.7	13.5	16.8	7.9	-8.4	18.7	-1.3	7.9	4.6	4.1	0.8	-2.4	6.3	9.1	4.1
Iceland	3.3	-3.6	2.9	–	-5.9	-1.9	7.0	9.9	-2.1	9.9	5.7	2.2	4.8	6.3	5.5
Israel [a]	10.2	-1.5	4.0	2.0	-2.6	14.1	9.9	12.8	8.4	4.9	8.0	6.6	11.6	23.9	-13.1
Malta	12.6	6.1	10.7	13.3	7.5	9.7	5.3	7.1	5.4	-5.9	4.0	8.1	8.2	5.6	-7.3
Norway [a]	1.1	6.4	11.0	8.6	7.0	4.7	3.2	8.4	4.9	10.2	7.7	0.6	2.8	2.9	4.2
Switzerland	2.2	7.0	6.9	2.6	-2.5	3.6	2.6	2.2	2.4	3.0	8.7	5.3	6.2	11.8	-0.9
Turkey	26.4	18.4	-0.3	2.5	3.7	11.0	7.7	15.2	8.0	22.0	19.1	12.0	-7.0	19.3	7.4
Western Europe	3.9	6.0	7.5	4.1	1.3	3.6	2.0	9.1	7.9	5.3	10.2	6.6	4.9	12.0	2.4
Canada [a]	2.9	8.9	1.0	4.7	1.8	7.2	10.8	12.7	8.5	5.6	8.3	9.1	10.0	8.0	-3.8
United States [a]	11.2	16.1	11.8	8.7	6.5	6.2	3.3	8.9	10.3	8.2	12.3	2.1	3.4	9.7	-5.4
North America	8.7	14.0	8.9	7.7	5.4	6.4	5.1	9.9	9.8	7.5	11.3	3.8	5.1	9.3	-5.0
Japan	-0.5	5.9	9.1	7.0	4.1	3.9	-0.1	3.5	4.1	6.5	11.2	-2.3	1.4	12.4	-6.6
Total above	4.6	7.9	8.0	5.2	2.6	4.4	2.6	8.9	8.2	6.0	10.6	5.2	4.7	11.3	-0.2
Memorandum items:															
4 major west European economies [e]	2.9	4.8	8.4	3.6	-0.3	3.1	0.7	8.5	8.4	4.4	9.6	5.6	4.1	12.3	2.4
Western Europe and North America	5.1	8.0	7.9	5.1	2.4	4.4	2.9	9.4	8.5	6.0	10.5	5.8	5.0	11.2	0.2

Source: Eurostat, New Cronos Database; OECD, *National Accounts* (Paris), various issues; national statistics.

Note: See appendix table A.1. Data on national accounts basis.

[a] Annual changes are calculated from chained national currency series.

[b] West Germany, 1987-1991.

[c] Twelve countries above.

[d] Fifteen countries above.

[e] France, Germany, Italy and the United Kingdom.

APPENDIX TABLE A.7

Real imports of goods and services in western Europe, North America and Japan, 1987-2001

(Percentage change over preceding year)

	1987	*1988*	*1989*	*1990*	*1991*	*1992*	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*	*1999*	*2000*	*2001*
France[a]	7.7	8.8	8.0	5.5	3.1	1.8	-3.7	8.2	8.0	1.6	6.9	11.6	6.2	14.3	0.1
Germany[b]	4.2	4.9	7.8	5.2	9.6	1.5	-5.5	7.4	5.6	3.1	8.3	9.1	8.5	10.5	1.0
Italy	12.2	5.9	8.9	11.5	2.3	7.4	-10.9	8.1	9.7	-0.3	10.1	8.9	5.3	9.4	0.2
Austria	4.8	9.3	8.0	6.9	5.8	1.4	-1.1	8.2	5.6	4.9	12.0	5.9	8.8	11.1	3.6
Belgium	6.7	10.4	9.6	4.8	2.8	4.1	-0.4	7.2	4.0	2.5	5.1	7.5	4.1	9.7	-1.4
Finland	9.2	10.9	9.0	-0.8	-13.5	0.6	1.3	12.8	7.8	6.4	11.3	8.5	4.0	16.0	0.1
Greece	2.1	7.3	10.5	8.4	5.8	1.1	0.6	1.5	8.9	7.0	14.2	9.2	3.8	14.5	-1.9
Ireland	6.2	4.9	13.5	5.1	2.4	8.2	7.5	15.5	16.4	12.5	16.8	25.8	11.9	16.6	7.7
Luxembourg	7.5	8.2	6.6	5.3	8.1	-1.3	3.7	3.4	3.8	6.2	11.8	12.4	15.1	14.9	2.6
Netherlands	4.2	6.9	8.2	3.6	5.1	1.4	0.7	9.4	10.6	4.4	9.5	8.5	5.8	10.6	1.9
Portugal	23.1	18.0	5.9	14.5	7.2	10.7	-3.3	8.8	7.4	4.9	10.0	14.2	8.8	5.8	0.9
Spain	24.8	16.1	17.7	9.6	10.3	6.8	-5.2	11.4	11.1	8.0	13.2	13.3	12.8	9.8	3.7
Euro area[c]	7.9	7.8	9.0	6.6	5.5	3.5	-4.3	8.3	7.8	3.3	9.3	10.1	7.4	11.1	1.2
United Kingdom	7.9	12.8	7.4	0.5	-4.5	6.8	3.3	5.7	5.4	9.6	9.7	9.6	8.7	11.7	2.7
Denmark	-3.1	8.3	4.1	1.2	3.0	-0.4	-2.7	12.3	7.3	3.5	10.0	8.9	3.3	11.2	4.3
Sweden[a]	7.6	4.5	7.7	0.7	-4.9	1.5	-2.2	12.2	7.2	3.0	12.5	11.2	4.4	11.5	-3.9
European Union[d]	7.6	8.3	8.7	5.5	3.8	3.7	-3.3	8.1	7.4	4.1	9.4	10.0	7.4	11.2	1.3
Cyprus	5.5	13.4	20.4	5.8	2.2	18.2	-18.1	8.2	11.5	7.0	0.4	6.6	-1.9	10.2	4.2
Iceland	23.3	-4.6	-10.3	1.0	5.3	-5.9	-7.7	4.2	4.0	16.7	8.5	23.3	5.7	-25.5	-3.0
Israel[a]	19.6	-2.8	-5.0	9.5	16.0	8.8	14.1	10.9	4.5	7.7	3.3	1.7	14.8	12.2	-6.4
Malta	12.3	11.1	11.1	15.7	5.4	3.0	5.9	7.5	10.0	-5.9	-1.7	2.5	10.1	11.2	-11.5
Norway[a]	-6.5	-2.4	2.2	2.5	-2.0	1.6	4.9	5.8	5.7	8.8	12.4	8.5	-1.8	3.2	–
Switzerland	5.8	4.7	6.6	2.8	-1.4	-4.7	-0.4	8.0	4.5	2.7	8.3	10.8	5.8	11.2	-0.1
Turkey	23.0	-4.5	6.9	33.0	-5.2	10.9	35.8	-21.9	29.6	20.5	22.4	2.3	-3.7	25.4	-24.8
Western Europe	7.6	7.7	8.4	6.0	3.4	3.7	-2.1	7.0	7.9	4.6	9.9	9.7	6.8	11.5	0.2
Canada[a]	5.3	13.5	5.9	2.0	2.5	4.7	7.4	8.0	5.7	5.1	14.2	5.1	7.8	8.2	-5.8
United States[a]	6.1	3.8	4.0	3.8	-0.5	6.6	9.1	12.0	8.2	8.6	13.7	11.8	10.9	13.2	-2.9
North America	5.9	5.9	4.4	3.4	0.2	6.2	8.7	11.1	7.6	7.9	13.8	10.3	10.2	12.2	-3.4
Japan	11.3	19.5	15.7	7.0	-1.1	-0.7	-1.4	7.8	12.8	13.2	1.2	-6.8	3.0	9.6	-0.6
Total above	7.4	7.9	7.8	5.3	2.2	4.0	0.8	8.2	8.2	6.2	10.4	8.8	7.7	11.6	-1.0
Memorandum items:															
4 major west European economies[e]	7.3	7.6	8.0	5.6	3.7	3.9	-4.6	7.3	6.9	3.4	8.7	9.7	7.4	11.3	1.0
Western Europe and North America	7.1	7.2	7.2	5.2	2.5	4.4	1.0	8.3	7.8	5.7	11.1	9.9	8.0	11.7	-1.0

Source: Eurostat, New Cronos Database; OECD, *National Accounts* (Paris), various issues; national statistics.

Note: See appendix table A.1. Data on national accounts basis.

[a] Annual changes are calculated from chained national currency series.

[b] West Germany, 1987-1991.

[c] Twelve countries above.

[d] Fifteen countries above.

[e] France, Germany, Italy and the United Kingdom.

APPENDIX TABLE A.8

Industrial output in western Europe, North America and Japan, 1987-2001

(Percentage change over preceding year)

	1987	*1988*	*1989*	*1990*	*1991*	*1992*	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*	*1999*	*2000*	*2001*
France	1.2	4.6	3.7	3.1	-0.3	-1.0	-3.8	4.4	2.3	0.9	3.9	5.1	2.0	3.5	0.8
Germany [a]	0.4	3.6	4.9	5.2	3.5	-2.5	-7.9	3.2	0.8	0.7	3.7	4.2	1.5	6.2	0.5
Italy	2.6	6.9	3.9	6.3	-0.4	-1.3	-2.1	6.2	5.0	-1.9	3.8	1.1	–	4.8	-1.3
Austria	1.0	4.4	5.8	6.8	1.9	-1.2	-1.5	4.0	4.9	1.0	6.4	8.2	6.0	8.9	0.1
Belgium	2.1	5.8	3.4	1.5	-1.9	-0.4	-5.1	2.1	6.5	0.5	4.7	3.4	0.9	5.3	-1.0
Finland	4.6	4.3	2.4	-1.7	-8.7	0.8	5.5	11.3	6.1	2.9	8.6	9.2	5.7	11.5	-1.1
Greece	-1.2	5.1	1.8	-2.5	-1.0	-1.1	-2.9	1.3	1.8	1.2	1.3	7.1	3.9	0.5	1.4
Ireland	8.9	10.7	11.6	4.7	3.3	9.1	5.6	11.9	20.5	8.1	17.5	19.8	14.8	15.4	10.2
Luxembourg	-0.6	8.7	7.8	2.6	0.4	-0.8	-4.3	5.9	2.0	0.1	5.8	-0.1	11.5	4.3	1.8
Netherlands	1.1	0.1	5.1	2.4	1.8	-0.2	-1.1	4.9	4.1	2.4	0.2	2.2	1.9	3.8	-0.7
Portugal	4.4	3.8	6.7	9.0	–	-2.3	-5.2	-0.2	11.6	5.3	2.6	5.7	3.0	0.5	2.4
Spain	4.6	3.1	5.1	-0.3	-0.7	-3.1	-4.7	7.7	4.8	-1.3	6.9	5.5	2.6	4.4	-1.4
Euro area [b]	1.6	4.2	4.6	2.8	0.7	-1.7	-4.8	4.5	3.4	0.4	4.2	4.4	2.0	5.5	0.2
United Kingdom	4.1	5.2	2.1	–	-3.3	0.4	2.1	5.2	1.8	1.2	1.1	1.0	0.8	1.7	-2.2
Denmark	-3.6	2.5	2.4	2.4	–	3.5	-2.2	10.3	4.2	2.0	5.9	1.9	2.7	6.2	1.7
Sweden	2.8	2.9	2.9	0.3	-5.2	-1.7	-0.4	11.5	9.8	1.0	6.4	4.3	3.1	8.4	-1.7
European Union [c]	1.9	4.2	4.2	2.5	-0.1	-1.4	-3.7	5.0	3.3	0.5	3.9	3.8	1.8	5.0	-0.1
Israel	4.9	-3.1	-1.6	8.0	6.8	8.2	6.9	7.4	8.4	5.4	1.8	2.8	1.4	10.1	-5.7
Norway	6.6	2.9	9.3	2.5	2.5	5.6	3.6	7.0	5.9	5.4	3.4	-0.6	-0.2	2.9	-0.3
Switzerland	1.2	7.8	1.5	4.8	0.5	-1.0	-1.8	4.3	2.0	–	4.6	3.6	3.5	8.4	-0.1
Turkey	10.5	1.6	3.6	9.5	2.7	5.0	8.0	-6.2	12.7	7.5	10.7	1.2	-3.7	6.1	-8.7
Western Europe	2.3	4.2	4.2	2.8	0.1	-1.0	-3.0	4.5	3.7	0.9	4.2	3.6	1.5	5.1	-0.5
Canada	4.2	6.6	-0.3	-2.7	-3.6	1.3	4.8	6.2	4.6	1.2	5.6	3.5	5.1	5.7	-3.4
United States	4.6	4.5	1.8	-0.2	-2.0	3.1	3.4	5.5	4.8	4.6	6.9	5.1	3.7	4.5	-3.9
North America	4.6	4.7	1.6	-0.4	-2.1	3.0	3.6	5.6	4.8	4.3	6.8	5.0	3.8	4.6	-3.8
Japan	3.4	9.4	5.8	4.2	1.9	-5.7	-3.5	1.3	3.3	2.3	3.5	-6.5	0.8	5.7	-7.3
Total above	3.3	5.4	3.6	2.0	-0.3	-0.8	-0.9	4.2	4.0	2.5	5.1	2.1	2.3	5.0	-3.0
Memorandum items:															
4 major west European economies [d]	1.8	4.9	3.8	3.9	0.5	-1.3	-3.7	4.6	2.3	0.2	3.2	2.9	1.1	4.4	-0.4
Western Europe and North America	3.3	4.4	3.0	1.4	-0.9	0.7	-0.2	5.0	4.2	2.5	5.4	4.3	2.6	4.9	-2.1

Source: National statistics; Eurostat, New Cronos Database; OECD, *Main Economic Indicators* (Paris), various issues; UNECE secretariat estimates.

Note: Except for the EU and the euro area, industrial output indices for regional aggregates have been calculated as weighted averages of the indices of the constituent countries; the EU and euro region aggregates are provided by Eurostat. Weights were derived from 1995 value added originating in industry converted from national currency units into dollars using 1995 GDP purchasing power parities.

[a] West Germany, 1987-1991.

[b] Twelve countries above.

[c] Fifteen countries above.

[d] France, Germany, Italy and the United Kingdom.

APPENDIX TABLE A.9

Total employment in western Europe, North America and Japan, 1987-2001

(Percentage change over preceding year)

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
France	-0.1	0.7	0.9	0.8	0.4	-0.5	-1.2	0.2	0.6	0.5	0.4	1.6	1.8	2.4	2.0
Germany [a]	0.7	0.8	1.5	3.0	2.5	-1.5	-1.4	-0.2	0.2	-0.3	-0.2	1.1	1.2	1.6	0.2
Italy	0.2	1.1	0.7	1.6	1.9	-0.5	-2.5	-1.5	-0.1	0.6	0.4	1.0	1.1	1.9	1.6
Austria	–	0.6	1.3	1.6	1.4	0.2	-0.6	-0.1	–	-0.6	0.6	0.7	1.2	0.5	0.2
Belgium	0.6	1.7	1.2	0.9	0.1	-0.5	-0.7	-0.4	0.7	0.4	0.8	1.2	1.4	1.6	1.2
Finland	0.5	1.2	0.7	-0.5	-5.7	-7.2	-6.2	-1.1	1.6	1.4	3.3	2.1	2.7	1.9	1.2
Greece	0.3	1.3	0.6	0.6	-1.4	1.0	1.2	1.7	0.5	-0.4	-0.5	4.1	-0.8	-0.3	-0.1
Ireland	0.8	0.6	1.0	2.7	0.4	1.1	1.3	4.3	4.3	3.6	5.6	8.6	6.0	4.7	2.9
Luxembourg	2.7	3.0	3.5	4.1	4.1	2.5	1.8	2.5	2.6	2.7	3.2	4.3	5.0	5.6	5.6
Netherlands	1.6	2.0	2.6	2.9	1.8	1.6	–	0.7	1.5	2.3	3.2	2.6	2.5	2.3	2.1
Portugal	2.3	2.5	1.9	1.9	2.8	-0.9	-1.9	-0.2	-0.7	0.5	1.7	2.7	1.7	2.0	1.6
Spain	4.8	3.5	3.6	3.8	1.2	-1.4	-2.8	-0.5	1.9	1.3	2.9	3.6	3.5	3.1	2.5
Euro area [b]	0.9	1.3	1.5	2.1	1.3	-0.8	-1.6	-0.2	0.5	0.5	0.8	1.8	1.7	2.0	1.3
United Kingdom [c]	2.6	4.3	2.4	0.3	-3.0	-2.1	-0.4	1.0	1.4	1.1	2.0	1.1	1.3	1.0	0.8
Denmark	0.4	-0.7	-0.7	-0.7	-0.6	-0.8	-1.5	1.4	0.5	0.7	1.2	1.7	1.5	0.8	0.2
Sweden	0.8	1.4	1.5	1.0	-2.0	-4.3	-5.3	-0.8	1.4	-0.6	-1.1	1.2	2.2	2.1	1.9
European Union [d]	1.2	1.8	1.6	1.7	0.4	-1.2	-1.8	-0.1	1.0	0.6	0.9	1.7	1.6	1.8	1.2
Cyprus [e]	3.1	4.7	3.9	2.8	0.6	4.1	-0.1	2.8	3.8	0.8	–	0.9	2.2	2.4	2.0
Iceland [e]	5.8	-3.0	-1.5	-1.1	-0.1	-1.4	-0.8	0.5	0.9	3.1	1.0	3.4	2.7	1.5	0.7
Israel	2.6	3.5	0.5	2.1	6.1	4.2	6.1	6.9	5.2	2.4	1.4	1.6	3.1	4.0	2.0
Malta [f]	5.9	2.5	0.9	0.8	2.5	1.0	0.5	-1.3	1.1	0.9	-0.5	0.5	0.8	1.9	0.5
Norway	2.0	-0.5	-2.8	-0.8	-0.9	-0.2	0.5	1.4	2.1	2.0	3.0	2.5	0.8	0.4	0.5
Switzerland	2.5	2.6	2.7	3.2	1.8	-1.5	-0.8	-0.3	0.3	0.1	0.1	1.0	0.7	1.1	1.2
Turkey	2.3	1.5	2.6	1.7	1.7	0.2	0.2	2.8	3.7	2.0	-2.5	2.8	2.2	2.7	-3.0
Western Europe	1.4	1.7	1.7	1.7	0.7	-1.0	-1.3	0.3	1.0	0.7	0.6	1.8	1.7	1.9	0.7
Canada	2.7	3.2	2.1	–	-1.8	-0.7	0.8	2.0	1.9	0.8	2.3	2.6	2.8	2.6	1.1
United States	2.6	2.3	2.0	1.3	-0.9	0.7	1.5	2.3	1.5	1.5	2.3	1.5	1.5	1.3	-0.1
North America	2.6	2.3	2.1	1.1	-1.0	0.5	1.4	2.3	1.5	1.4	2.3	1.6	1.7	1.4	–
Japan	0.4	1.2	1.5	1.7	2.0	1.1	0.4	0.1	0.1	0.4	1.0	-0.7	-0.8	-0.2	-0.5
Total above	1.6	1.8	1.8	1.5	0.3	-0.1	-0.1	1.0	1.1	0.9	1.3	1.3	1.3	1.4	0.3
Memorandum items:															
4 major west European economies [g]	0.9	1.7	1.4	1.6	0.6	-1.2	-1.3	-0.1	0.5	0.4	0.6	1.2	1.4	1.7	1.0
Western Europe and North America	1.9	2.0	1.8	1.5	–	-0.4	-0.1	1.1	1.3	1.0	1.3	1.7	1.7	1.7	0.4

Source: Eurostat, New Cronos Database; OECD, *National Accounts* and *Economic Outlook*, latest issues; national statistics.

Note: Total employment is defined as the number of persons engaged in some productive activity within resident production units (national accounts concept). The labour force survey concept (based on resident household surveys) is used for Canada, Israel, Turkey, the United Kingdom and the United States; Austria (up to 1987); Portugal (up to 1990); Ireland, the Netherlands and Spain (up to 1994). All aggregates exclude Israel.

[a] West Germany, 1987-1991.

[b] Twelve countries above.

[c] Number of jobs.

[d] Fifteen countries above.

[e] Full-time equivalent.

[f] Full-time occupied at the end of the year.

[g] France, Germany, Italy and the United Kingdom.

APPENDIX TABLE A.10

Standardized unemployment rates[a] in western Europe, North America and Japan, 1987-2001
(Per cent of civilian labour force)

	1987	*1988*	*1989*	*1990*	*1991*	*1992*	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*	*1999*	*2000*	*2001*
France	10.1	9.6	9.0	8.6	9.1	10.0	11.3	11.8	11.3	11.9	11.8	11.4	10.7	9.3	8.6
Germany[b]	6.3	6.2	5.6	4.8	4.2	6.4	7.7	8.2	8.0	8.7	9.7	9.1	8.4	7.8	7.7
Italy	9.6	9.7	9.7	8.9	8.5	8.7	10.1	11.0	11.5	11.5	11.6	11.7	11.3	10.4	9.4
Austria	3.8	3.6	3.1	3.2	3.5	3.6	3.9	3.8	3.9	4.4	4.4	4.5	3.9	3.7	3.6
Belgium	9.8	8.8	7.4	6.6	6.4	7.1	8.6	9.8	9.7	9.5	9.2	9.3	8.6	6.9	6.6
Finland	4.9	4.2	3.1	3.2	6.6	11.7	16.4	16.6	15.4	14.6	12.7	11.4	10.2	9.8	9.1
Greece	6.7	6.8	6.7	6.4	7.1	7.9	8.6	8.9	9.2	9.6	9.8	10.9	11.9	11.1	10.5
Ireland	16.6	16.2	14.7	13.4	14.7	15.4	15.6	14.3	12.3	11.7	9.9	7.5	5.6	4.2	3.8
Luxembourg	2.5	2.0	1.8	1.7	1.6	2.1	2.6	3.2	2.9	2.9	2.7	2.7	2.4	2.3	2.0
Netherlands	7.6	7.2	6.6	5.8	5.5	5.3	6.2	6.8	6.6	6.0	4.9	3.8	3.2	2.8	2.4
Portugal	7.2	5.8	5.2	4.8	4.2	4.3	5.6	6.9	7.3	7.3	6.8	5.1	4.5	4.1	4.1
Spain	16.7	15.9	13.9	13.1	13.2	14.9	18.6	19.8	18.8	18.1	17.0	15.2	12.8	11.3	10.6
Euro area[c]	10.0	9.6	8.9	8.2	8.2	9.1	10.1	10.8	10.6	10.8	10.8	10.2	9.4	8.5	8.0
United Kingdom	10.3	8.5	7.1	6.9	8.6	9.8	10.2	9.4	8.5	8.0	6.9	6.2	5.8	5.4	5.0
Denmark	5.0	5.7	6.8	7.2	7.9	8.6	9.5	7.7	6.7	6.3	5.2	4.9	4.8	4.4	4.3
Sweden	2.2	1.8	1.6	1.7	3.1	5.6	9.1	9.4	8.8	9.6	9.9	8.3	7.1	5.8	4.9
European Union[d]	9.7	9.1	8.3	7.7	8.2	9.2	10.1	10.5	10.1	10.2	10.0	9.4	8.7	7.8	7.4
Cyprus[e]	3.4	2.8	2.3	1.8	3.0	1.8	2.6	2.7	2.6	3.1	3.4	3.4	3.6	3.5	3.5
Iceland	0.5	0.6	1.6	1.8	2.6	4.3	5.3	5.4	4.9	3.8	3.9	2.7	2.1	2.3	1.4
Israel[f]	6.1	6.4	8.9	9.6	10.6	11.2	10.0	7.8	6.9	6.7	7.7	8.5	8.9	8.8	9.2
Malta[g]	4.4	4.0	3.7	3.8	3.6	4.0	4.5	4.1	3.8	4.4	5.0	5.1	5.3	4.5	4.9
Norway	2.1	3.2	5.0	5.3	5.6	6.0	6.1	5.5	5.0	4.9	4.1	3.3	3.3	3.5	3.6
Switzerland	0.7	0.6	0.5	0.5	2.0	3.1	4.0	3.8	3.5	3.9	4.2	3.5	3.0	2.6	2.6
Turkey[f]	8.3	8.4	8.7	8.2	7.9	7.9	7.6	8.1	6.9	6.1	6.4	6.8	7.6	6.6	8.5
Western Europe	8.8	8.3	7.7	7.2	7.3	8.4	9.7	10.0	9.6	9.6	9.4	8.9	8.4	7.5	7.3
Canada	8.8	7.8	7.6	8.1	10.3	11.2	11.4	10.4	9.4	9.6	9.1	8.3	7.6	6.8	7.2
United States	6.2	5.5	5.3	5.5	6.7	7.4	6.8	6.1	5.6	5.4	4.9	4.5	4.2	4.0	4.8
North America	6.5	5.7	5.5	5.8	7.1	7.8	7.3	6.5	6.0	5.8	5.3	4.9	4.5	4.3	5.0
Japan	2.8	2.3	2.3	2.1	2.1	2.2	2.5	2.9	3.1	3.4	3.4	4.1	4.7	4.7	5.0
Total above	7.0	6.4	6.0	5.8	6.4	7.2	7.6	7.6	7.2	7.2	7.0	6.7	6.4	5.9	6.1
Memorandum items:															
4 major west European economies[h]	9.0	8.4	7.7	7.1	7.2	8.5	9.6	9.8	9.5	9.8	9.8	9.4	8.8	8.0	7.6
Western Europe and North America	7.8	7.2	6.8	6.6	7.2	8.2	8.6	8.5	8.0	8.0	7.7	7.2	6.7	6.1	6.3

Source: OECD, *Main Economic Indicators* and *Quarterly Labour Force Statistics* (Paris), latest issues; Eurostat, New Cronos Database; national statistics.

Note: All aggregates exclude Israel. Comparisons with previous years are limited by changes in methodology in Austria (1993), Iceland (1991), Israel (1995), Norway (1989), Switzerland (1991) and the United States (1994).

[a] Eurostat-OECD definition except for Austria (1987-1992), Cyprus, Iceland (1987-1990), Israel, Malta, Switzerland (1987-1990) and Turkey.

[b] West Germany, 1987-1991.

[c] Twelve countries above.

[d] Fifteen countries above.

[e] Registered unemployment rate, average of monthly data.

[f] Definitions comply with ILO guidelines but do not follow the Eurostat-OECD standards.

[g] Registered unemployment rate at the end of the year.

[h] France, Germany, Italy and the United Kingdom.

APPENDIX TABLE A.11

Consumer prices in western Europe, North America and Japan, 1987-2001

(Percentage change over previous year)

	1987	*1988*	*1989*	*1990*	*1991*	*1992*	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*	*1999*	*2000*	*2001*
France	3.3	2.7	3.5	3.5	3.2	2.4	2.1	1.7	1.8	2.0	1.2	0.8	0.5	1.7	1.6
Germany [a]	0.3	1.3	2.8	2.7	4.0	5.1	4.4	2.8	1.7	1.4	1.9	0.9	0.6	1.9	2.5
Italy	4.8	5.1	6.3	6.5	6.3	5.3	4.6	4.1	5.2	4.0	2.0	2.0	1.7	2.5	2.8
Austria	1.5	1.9	2.6	3.3	3.3	4.0	3.6	3.0	2.2	1.5	1.3	0.9	0.6	2.3	2.6
Belgium	1.6	1.2	3.1	3.4	3.2	2.4	2.8	2.4	1.5	2.1	1.6	0.9	1.1	2.5	2.5
Finland	4.1	5.1	6.6	6.1	4.3	2.9	2.2	1.1	0.8	0.6	1.2	1.4	1.2	3.0	2.6
Greece	16.4	13.5	13.7	20.4	19.5	15.9	14.4	10.9	8.9	8.2	5.5	4.8	2.6	3.2	3.4
Ireland	3.1	2.1	4.1	3.3	3.2	3.1	1.4	2.4	2.5	1.7	1.4	2.4	1.6	5.6	4.9
Luxembourg	-0.1	1.4	3.4	3.3	3.1	3.2	3.6	2.2	1.9	1.3	1.4	1.0	1.0	3.2	2.7
Netherlands	-0.7	0.7	1.1	2.4	3.2	3.2	2.6	2.8	1.9	2.0	2.2	2.0	2.2	2.5	4.5
Portugal	9.4	9.7	12.6	13.4	10.5	9.5	6.7	5.4	4.2	3.1	2.3	2.8	2.3	2.9	4.3
Spain	5.2	4.8	6.8	6.7	5.9	5.9	4.6	4.7	4.7	3.6	2.0	1.8	2.3	3.4	3.6
Euro area [b]	2.6	2.9	4.3	4.5	4.8	4.6	4.0	3.2	3.0	2.5	1.9	1.4	1.2	2.4	2.7
United Kingdom	4.2	4.9	7.8	9.5	5.9	3.7	1.6	2.5	3.4	2.5	3.1	3.4	1.6	2.9	1.8
Denmark	4.0	4.5	4.8	2.6	2.4	2.1	1.3	2.0	2.1	2.1	2.2	1.8	2.5	2.9	2.4
Sweden	4.2	6.1	6.6	10.4	9.7	2.6	4.7	2.4	2.9	0.8	0.9	0.4	0.3	1.3	2.6
European Union [c]	2.9	3.3	4.9	5.5	5.0	4.4	3.5	3.0	3.0	2.5	2.1	1.8	1.3	2.5	2.6
Cyprus	2.8	3.4	3.8	4.5	5.0	6.5	4.9	4.7	2.6	2.9	3.6	2.2	1.7	4.0	2.0
Iceland	18.3	25.7	20.8	15.5	6.8	4.0	4.1	1.6	1.6	2.3	1.8	1.7	3.2	5.1	6.4
Israel	19.9	16.3	20.2	17.2	19.0	12.0	11.0	12.3	10.1	11.3	9.0	5.4	5.2	1.1	1.1
Malta	0.5	0.9	0.9	3.0	2.5	1.6	4.1	4.1	4.0	2.5	3.2	2.2	2.1	2.4	2.9
Norway	8.7	6.7	4.5	4.1	3.4	2.3	2.3	1.4	2.4	1.3	2.6	2.3	2.3	3.1	3.0
Switzerland	1.4	1.9	3.1	5.4	5.9	4.0	3.3	0.9	1.8	0.8	0.5	–	0.8	1.6	1.0
Turkey	37.8	69.4	63.3	60.3	65.8	70.1	66.2	105.2	89.1	80.4	85.7	84.6	64.9	54.9	54.4
Western Europe	2.9	3.4	4.9	5.5	5.0	4.4	3.5	3.0	3.0	2.4	2.0	1.7	1.3	2.4	2.5
Canada	4.3	4.1	5.0	4.8	5.6	1.5	1.9	0.2	2.2	1.6	1.6	1.0	1.7	2.7	2.5
United States	3.6	4.1	4.8	5.4	4.2	3.0	3.0	2.6	2.8	3.0	2.3	1.6	2.2	3.4	2.8
North America	3.7	4.1	4.8	5.4	4.3	2.9	2.9	2.4	2.8	2.9	2.2	1.5	2.2	3.3	2.8
Japan	0.1	0.7	2.3	3.1	3.2	1.7	1.3	0.7	-0.1	0.1	1.7	0.7	-0.3	-0.7	-0.7
Total above	2.8	3.3	4.4	5.0	4.4	3.3	2.9	2.4	2.5	2.3	2.1	1.5	1.5	2.5	2.3
Memorandum items:															
4 major west European economies [d]	2.7	3.1	4.8	5.2	4.7	4.2	3.3	2.7	2.9	2.4	2.1	1.7	1.1	2.3	2.2
Western Europe and North America	3.4	3.8	4.8	5.4	4.6	3.5	3.2	2.6	2.9	2.7	2.2	1.6	1.8	2.9	2.7

Source: National statistics.

Note: All aggregates exclude Israel and Turkey. Consumer price indexes for regional aggregates have been calculated as weighted averages of constituent country indices. Weights were derived from 2000 private final consumption expenditure converted from national currency units into a common currency using 2000 purchasing power parities.

[a] West Germany, 1987-1991.

[b] Twelve countries above.

[c] Fifteen countries above.

[d] France, Germany, Italy and the United Kingdom.

APPENDIX TABLE B.1

Real GDP/NMP in eastern Europe, the Baltic states and the CIS, 1980, 1988-2001

(Indices, 1989=100)

	1980	*1988*	*1989*	*1990*	*1991*	*1992*	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*	*1999*	*2000*	*2001*
Eastern Europe	88.7	100.8	100.0	93.2	82.9	79.3	79.0	82.1	86.9	90.2	92.1	94.1	95.7	99.3	102.2
Albania	79.4	91.0	100.0	90.0	64.8	60.1	65.9	71.4	80.9	88.2	82.0	88.6	95.0	102.4	109.0
Bosnia and Herzegovina	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Bulgaria	76.2	101.9	100.0	90.9	83.3	77.2	76.1	77.5	79.7	72.2	68.2	70.9	72.5	76.4	79.5
Croatia	99.0	101.6	100.0	92.9	73.3	64.7	59.5	63.0	67.3	71.3	76.2	78.1	77.4	79.6	82.6
Czech Republic	..	95.7	100.0	98.8	87.3	86.9	86.9	88.9	94.1	98.2	97.4	96.4	96.9	100.0	103.3
Hungary	86.3	99.3	100.0	96.5	85.0	82.4	81.9	84.4	85.6	86.8	90.7	95.1	99.1	104.3	108.2
Poland	91.1	99.8	100.0	88.4	82.2	84.4	87.6	92.1	98.6	104.5	111.7	117.1	121.8	126.7	128.0
Romania	88.5	106.2	100.0	94.4	82.2	75.0	76.2	79.2	84.8	88.2	82.8	78.8	77.9	79.3	83.5
Slovakia	..	99.0	100.0	97.5	83.3	78.0	75.1	79.0	84.1	89.0	94.0	97.7	99.0	101.2	104.5
Slovenia	98.9	100.5	100.0	91.9	83.7	79.1	81.4	85.7	89.3	92.4	96.6	100.3	105.5	110.4	113.6
The former Yugoslav Republic of Macedonia	93.3	98.1	100.0	89.8	84.3	78.7	72.8	71.6	70.8	71.6	72.6	75.1	78.4	81.9	78.6
Yugoslavia[a]	95.7	98.8	100.0	92.1	81.4	58.7	40.6	41.7	44.2	46.8	50.3	51.5	42.4	45.1	47.9
Baltic states	67.8	96.0	100.0	97.8	89.2	68.2	59.1	56.4	57.6	60.0	64.9	68.1	67.4	71.1	75.5
Estonia	74.5	93.8	100.0	91.9	82.7	71.0	65.0	63.7	66.4	69.0	75.7	79.2	78.7	84.3	88.6
Latvia	68.5	93.6	100.0	102.9	89.9	61.1	54.1	55.3	54.7	56.8	61.5	64.4	66.3	70.8	76.2
Lithuania	64.7	98.4	100.0	96.7	91.2	71.8	60.2	54.3	56.1	58.7	63.0	66.2	63.6	66.0	70.0
CIS[b]	77.5	98.1	100.0	96.8	90.9	78.0	70.4	60.3	56.9	55.1	55.7	54.0	56.4	61.1	64.9
Armenia	73.5	92.2	100.0	94.5	83.5	48.6	44.3	46.7	49.9	52.9	54.6	58.6	60.5	64.1	70.3
Azerbaijan	79.6	109.7	100.0	88.3	87.7	67.9	52.2	41.9	37.0	37.4	39.6	43.6	46.8	52.0	57.1
Belarus	65.7	92.4	100.0	98.1	96.7	87.4	80.8	71.4	63.9	65.7	73.2	79.4	82.1	86.8	90.4
Georgia	79.4	103.6	100.0	84.9	67.0	36.9	26.1	23.4	24.0	26.7	29.5	30.3	31.2	31.8	33.3
Kazakhstan	87.0	100.1	100.0	99.0	88.2	83.5	75.8	66.2	60.8	61.1	62.1	60.9	62.6	68.7	78.0
Kyrgyzstan	69.1	95.6	100.0	104.8	96.5	83.2	70.3	56.2	53.1	56.9	62.5	63.9	66.2	69.8	73.5
Republic of Moldova	72.1	91.9	100.0	97.6	80.5	57.2	56.5	39.0	38.5	36.2	36.8	34.4	33.2	34.0	36.0
Russian Federation	78.1	98.4	100.0	97.0	92.2	78.8	71.9	62.8	60.2	58.2	58.7	55.9	58.9	64.2	67.4
Tajikistan	80.8	106.9	100.0	100.2	91.7	62.1	52.0	40.9	35.8	29.8	30.3	32.0	33.1	35.9	39.5
Turkmenistan	80.7	107.5	100.0	101.8	97.0	82.5	83.7	69.2	64.2	68.5	60.7	65.0	76.0	89.4	107.7
Ukraine	75.0	95.2	100.0	96.4	88.0	79.3	68.0	52.4	46.0	41.4	40.2	39.4	39.3	41.6	45.4
Uzbekistan	76.0	97.0	100.0	99.2	98.7	87.7	85.7	81.2	80.5	81.9	86.1	89.9	93.9	97.6	102.0
Total above	80.3	98.7	100.0	95.9	88.7	78.2	72.4	66.0	64.8	64.4	65.4	64.8	67.0	71.4	74.9
Memorandum items:															
CETE-5	88.6	99.6	100.0	93.3	84.1	83.8	85.0	88.5	93.5	97.9	102.3	105.8	109.1	113.4	115.9
SETE-7	88.8	102.9	100.0	93.1	80.8	71.4	68.5	70.9	75.3	76.8	74.3	73.5	72.2	74.6	78.1
Former GDR	..	..	100.0	84.5	68.3	73.3	80.1	87.9	91.9	94.9	96.7	97.7	99.0	101.1	100.4

Source: UNECE Common Database, derived from national and Interstate Statistical Committee of the CIS statistics; *DIW Wochenbericht*, No. 43 (Vienna), 2001 for the former GDR since 1998.

Note: Data for the east European countries are based on a GDP measure, except where otherwise mentioned. For the countries of the former Soviet Union, NMP data for 1980-1990 were chain-linked to GDP data from 1990. Country indices were aggregated with previous year PPP-based weights obtained from the European Comparison Programme for 1996.

[a] Gross material product (1980-1989 for Croatia). Yugoslavia: since 1999, without Kosovo and Metohia.

[b] Net material product for 1980-1990 (until 1992 in the case of Turkmenistan).

APPENDIX TABLE B.2

Real total consumption expenditure in eastern Europe, the Baltic states and the CIS, 1980, 1988-2001

(Indices, 1989=100 or earliest year available thereafter)

	1980	*1988*	*1989*	*1990*	*1991*	*1992*	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*	*1999*	*2000*	*2001*
Bulgaria	..	..	100.0	100.6	92.3	89.4	86.2	82.3	80.7	74.1	67.1	69.8	75.9	80.2	83.9
Croatia	..	..	..	..	100.0	87.2	85.3	92.0	106.6	106.5	117.1	117.4	116.0	118.8	121.1
Czech Republic	..	93.1	100.0	104.9	85.5	88.4	90.2	94.5	97.2	103.7	104.3	101.8	103.7	105.4	108.5
Hungary	92.2	102.0	100.0	97.3	92.2	92.8	97.9	95.6	89.3	86.1	88.1	91.7	95.6	99.1	102.6
Poland	108.0	114.7	100.0	88.3	94.9	98.2	103.0	107.0	110.5	118.4	125.6	130.8	136.6	140.0	142.5
Romania	83.9	90.6	100.0	108.9	96.0	90.7	91.8	95.3	105.5	112.9	108.1	109.3	106.5	107.7	113.8
Slovakia	..	92.1	100.0	103.3	76.9	75.6	74.2	72.6	75.1	83.6	85.8	92.4	92.5	91.6	95.5
Slovenia	..	..	..	100.0	91.6	88.8	99.1	102.6	110.2	112.7	116.3	120.9	127.7	129.5	132.2
The former Yugoslav Republic of Macedonia	..	..	..	100.0	93.9	84.2	89.7	95.9	94.3	96.5	98.5	101.8	105.6	114.0	..
Estonia	..	..	..	..	..	..	100.0	101.9	109.0	115.7	122.7	128.1	126.9	133.0	138.4
Latvia	..	..	..	100.0	76.7	49.2	46.5	47.4	47.0	50.8	52.7	56.0	58.2	60.4	63.9
Lithuania	..	..	..	..	..	..	..	..	100.0	108.2	116.4	125.4	122.4	126.8	129.0
Armenia	..	..	..	100.0	97.4	84.9	66.4	68.9	74.5	76.8	81.7	85.4	85.7	92.3	97.6
Azerbaijan	..	..	..	..	..	100.0	77.4	62.2	60.4	65.3	72.2	80.4	88.1	96.9	..
Belarus	..	..	..	100.0	93.5	84.1	78.8	70.0	63.4	65.7	72.3	80.9	87.7	94.2	..
Georgia	..	..	..	100.0	79.2	77.1	45.4	42.4	46.1	..	..	..	..	..	..
Kazakstan	..	..	..	100.0	96.8	96.2	84.9	67.7	55.0	51.3	51.8	50.4	51.1	54.7	..
Kyrgyzstan	..	..	..	100.0	83.5	72.8	64.3	51.8	43.4	46.2	42.4	48.8	49.3	47.9	48.6
Republic of Moldova	..	..	..	..	..	..	100.0	82.6	90.3	99.7	111.5	109.3	92.0	107.8	117.5
Russian Federation	..	..	..	100.0	93.9	89.0	88.1	85.4	83.1	80.5	82.9	81.7	79.7	85.6	90.9
Ukraine	..	..	..	100.0	94.7	88.7	72.1	65.1	62.7	57.5	56.4	56.4	54.3	55.4	60.3

Source: UNECE Common Database, derived from national and Interstate Statistical Committee of the CIS statistics.

APPENDIX TABLE B.3

Real gross fixed capital formation in eastern Europe, the Baltic states and the CIS, 1980, 1988-2001

(Indices, 1989=100 or earliest year available thereafter)

	1980	*1988*	*1989*	*1990*	*1991*	*1992*	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*	*1999*	*2000*	*2001*
Bulgaria	..	..	..	100.0	80.0	74.1	61.2	61.9	71.8	56.6	44.7	60.5	73.1	84.4	101.1
Croatia	..	..	..	..	100.0	88.5	94.5	93.6	108.2	148.8	183.5	188.1	180.8	173.9	190.7
Czech Republic	..	99.4	100.0	97.9	71.1	82.8	83.0	90.5	108.5	117.3	113.9	114.7	113.5	119.6	128.3
Hungary	114.7	100.6	100.0	92.9	83.1	81.0	82.6	92.9	88.9	94.8	103.6	117.3	124.2	133.8	137.9
Poland	124.6	126.5	100.0	75.2	71.9	73.6	75.7	82.6	96.2	115.2	140.1	160.0	170.9	175.6	158.4
Romania	163.7	157.6	100.0	64.4	44.0	48.9	52.9	63.9	68.3	72.2	73.4	69.2	65.9	68.9	73.5
Slovakia	..	..	..	100.0	74.8	71.5	67.7	66.0	67.1	87.9	100.4	111.5	90.9	92.0	100.8
Slovenia	..	..	..	100.0	88.5	77.1	85.4	97.4	113.8	123.9	138.2	153.9	183.2	183.6	180.2
The former Yugoslav Republic of Macedonia	..	..	..	100.0	95.8	79.9	73.6	67.3	74.1	79.0	75.6	73.6	72.5	70.2	..
Estonia	..	..	..	..	..	..	100.0	106.3	110.6	123.2	144.8	161.1	137.4	155.7	169.9
Latvia	..	..	..	100.0	36.1	25.7	21.6	21.8	23.7	29.0	35.0	50.4	48.4	58.0	64.8
Lithuania	..	..	..	..	..	..	..	..	100.0	117.6	143.6	157.8	147.9	142.2	154.6
Armenia	..	..	..	100.0	67.0	8.6	7.9	11.5	9.5	10.5	10.7	12.0	12.1	14.0	14.6
Azerbaijan	..	..	..	..	..	100.0	61.0	115.3	94.5	199.8	333.7	483.9	474.2	486.5	..
Belarus	..	..	..	100.0	104.2	84.8	78.3	67.6	47.6	46.1	56.2	61.8	59.3	60.7	..
Georgia	..	..	..	100.0	67.3	49.2	18.5	133.4	219.9	..	..	..	..	..	..
Kazakstan	..	..	..	100.0	74.2	61.9	44.2	39.2	24.3	18.5	19.1	17.8	17.9	20.4	..
Kyrgyzstan	..	..	..	100.0	89.4	63.2	49.4	35.1	56.4	49.1	34.6	34.0	43.6	55.3	47.2
Republic of Moldova	..	..	..	..	..	..	100.0	56.5	50.8	63.8	60.4	66.0	50.8	46.4	44.9
Russian Federation	..	..	..	100.0	84.5	49.4	36.7	27.1	25.1	20.8	19.1	17.3	18.2	20.8	22.5
Ukraine	..	..	..	100.0	79.1	67.4	46.8	27.6	19.1	14.8	15.1	15.5	15.5	17.4	18.8

Source: UNECE Common Database, derived from national and Interstate Statistical Committee of the CIS statistics.

APPENDIX TABLE B.4

Real gross industrial output in eastern Europe, the Baltic states and the CIS, 1980, 1988-2001

(Indices, 1989=100)

	1980	*1988*	*1989*	*1990*	*1991*	*1992*	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*	*1999*	*2000*	*2001*
Eastern Europe	82.8	100.6	100.0	85.9	70.2	63.0	61.5	65.5	70.3	73.9	77.2	78.3	78.5	85.1	87.7
Albania	77.0	95.2	100.0	86.7	50.4	35.2	31.7	25.8	23.9	18.1	18.6	22.7	26.3	29.4	23.6
Bosnia and Herzegovina	106.0	98.1	100.0	101.8	76.9	25.5	2.0	1.7	2.8	5.2	7.0	8.7	9.6	10.5	11.8
Bulgaria	71.3	101.1	100.0	83.2	66.4	54.2	48.8	54.0	56.4	59.3	48.4	44.3	40.0	44.1	43.0
Croatia	88.7	100.6	100.0	88.7	63.4	54.2	51.0	49.6	49.7	51.3	54.8	56.8	56.0	57.0	60.4
Czech Republic	81.5	98.5	100.0	96.6	75.7	69.8	66.1	67.4	73.3 |	74.8	78.1	79.4	76.9	81.1	86.6
Hungary	92.9	105.3	100.0	90.7	74.0	66.8	69.5	76.2	79.7	82.4	91.5	103.0	113.7	135.0	139.7
Poland	86.3	100.5	100.0	75.8	69.7	71.7	76.3	85.5	93.8	101.6	113.3	117.3	121.5	129.6	129.5
Romania	76.9	101.9	100.0	81.9	63.3	49.4	50.1	51.7	56.6 |	60.1	55.8	48.1	47.0	50.3	54.4
Slovakia	76.7	100.8	100.0	94.0	75.9	68.6	66.1	69.3	75.1	76.9	77.9	80.9	78.7	85.5	91.4
Slovenia	90.3	98.9	100.0	89.5	78.4	68.1	66.1	70.4	71.8	72.5	73.2	75.9	75.6	80.2	82.6
The former Yugoslav Republic of Macedonia	72.1	95.6	100.0	89.4	74.0	62.3	53.7	48.0	42.9	44.3	45.0	47.0	45.8	47.4	45.9
Yugoslavia	80.0	98.4	100.0	88.0	72.5	57.0	35.7	36.2	37.6	40.4	44.2	45.8	35.2	39.2	39.2
Baltic states	72.1	96.6	100.0	98.6	95.1	64.7	44.4	36.3	37.1	38.9	42.1	44.6	41.0	44.1	49.5
Estonia	78.5	99.3	100.0	100.0	92.8	59.8	48.6	47.1	48.0	49.4	56.6	59.0	57.0 |	65.3	70.4
Latvia	72.5	97.1	100.0	100.8	100.2	65.6	44.6	40.1	38.7	40.8	46.4	47.9	45.3	47.4	50.7
Lithuania	70.0	95.6	100.0	97.4	94.0	65.8	43.2	31.7	33.4	35.0	36.2	39.2	34.8	36.6	42.8
CIS	73.4	98.2	100.0	99.9	93.1	78.2	68.4	53.6	50.7	49.0	50.3	48.7	53.2	59.4	63.4
Armenia	76.3	109.1	100.0	92.5	85.4	44.2	39.5	41.6	42.2	42.8	43.2	42.3	44.6	47.4	49.2
Azerbaijan	76.1	99.3	100.0	93.7	85.4	59.4	47.7	35.9	28.2	26.3	26.4	27.0	28.0	29.9	31.4
Belarus	61.1	95.6	100.0	102.1	101.1	91.8	83.2	71.0	62.7	64.9	77.1	86.7	95.6	103.0	109.1
Georgia	70.6	99.3	100.0	94.3	73.0	39.6	25.0	15.2	13.2	14.1	15.2	15.0	16.1	17.8	16.9
Kazakhstan	72.4	97.6	100.0	99.2	98.3	84.7	72.2	51.9	47.7	47.8	49.7	48.5	49.8	57.5	65.3
Kyrgyzstan	66.7	95.1	100.0	99.4	99.1	73.5	56.3	35.5	26.7	27.8	38.8	40.9	39.1	41.4	43.7
Republic of Moldova	68.7	94.6	100.0	103.2	91.7	66.9	67.1	48.5	46.6	43.6	43.6	37.0	32.7	35.3	40.1
Russian Federation	74.4	98.6	100.0	99.9	91.9	75.4	64.7	51.2	49.5	47.5	48.5	46.0	51.0	57.1	59.9
Tajikistan	72.9	98.2	100.0	101.2	97.6	73.9	68.1	50.8	43.9	33.4	32.7	35.4	37.4	41.1	47.3
Turkmenistan	75.4	96.9	100.0	103.2	108.2	92.0	95.7	72.1	67.5	81.0	63.1	64.4	74.1	96.3	106.9
Ukraine	72.6	97.3	100.0	99.9	95.1	89.0	81.9	59.5	52.4	49.7	49.6	49.1	51.0	57.4	65.5
Uzbekistan	68.5	96.5	100.0	101.8	103.3	96.4	99.9	101.5	101.6	104.2	108.5	112.4	118.8	125.8	135.4
Total above	76.5	99.0	100.0	95.2	85.4	72.7	65.5	57.2	57.0	57.1	59.1	58.6	61.4	67.7	71.2
Memorandum items:															
CETE-5	85.4	100.7	100.0	87.0	73.3	69.8	70.6	76.3	82.4	86.5	93.7	97.8	100.2	108.9	111.9
SETE-7	78.6	100.6	100.0	84.1	65.4	52.0	47.0	48.3	51.1	53.9	50.9	47.2	44.0	47.3	49.2
Former GDR	75.2	97.7	100.0	72.7	37.0	34.7	34.9	38.1	39.9	41.7	44.6	48.2	51.7	57.2	59.4

Source: UNECE Common Database, derived from national and Interstate Statistical Committee of the CIS statistics.

Note: For the countries of the former Soviet Union, Soviet data for 1980-1990 were chain-linked to national or CIS data from 1990. Country indices were aggregated with previous year PPP-based weights on the basis of data obtained from the European Comparison Programme for 1996.

APPENDIX TABLE B.5

Total employment in eastern Europe, the Baltic states and the CIS, 1980, 1988-2001

(Indices, 1989=100)

	1980	*1988*	*1989*	*1990*	*1991*	*1992*	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*	*1999*	*2000*	*2001*
Eastern Europe [a]	96.7	99.9	100.0	97.1	92.6	87.2	84.4	84.3	84.0	87.5	88.5	88.8	87.5	86.3	85.9
Albania	77.9	97.6	100.0	99.2	97.5	76.0	72.7	80.7	80.4	77.5	76.9	75.4	74.0	74.2	74.3
Bosnia and Herzegovina	..	..	..	..	100.0	38.0	17.0	15.7	17.4	38.8	59.2	62.7	64.6	65.1	64.6
Bulgaria	100.0	102.4	100.0	93.9	81.6	75.0	73.8	74.3	75.2	75.3	72.3	72.2	70.7	68.3	67.4
Croatia	87.4	100.4	100.0	97.1	89.2	79.3	76.6	74.8	73.9	74.5	73.9	86.0	85.1	82.9	82.4
Czech Republic	95.3	99.4	100.0	99.1	93.6	91.2	89.7	90.4	92.8	93.4	91.6	90.4	88.1	86.3	85.4
Hungary [b]	104.2	100.7	100.0	96.7	86.7 │	78.1	73.2	71.8	70.4	69.8	69.8	70.7	72.9	73.6	73.8
Poland	102.0	100.1	100.0	95.8	90.1	86.3	84.3	85.1	86.7	88.3	90.8	92.9	90.4	88.3	88.1
Romania [c]	94.6	98.7	100.0	99.0	98.5	95.5	91.9	91.5	86.7 │	99.9	101.0	99.1	98.4	98.3	97.7
Slovakia [d]	90.8	99.8	100.0	98.2	85.9	86.8 │	87.7	84.0	85.7	88.6	88.1	87.8	85.1	83.9	84.8
Slovenia [e]	84.0	101.3	100.0	96.1	88.7	83.8	81.3	79.3	79.1	78.7	78.6	78.7	80.2	81.2	82.3
The former Yugoslav Republic of Macedonia	81.2	99.7	100.0	98.2	90.7	86.4	81.5	76.6	69.0	65.8	61.8	60.1	61.1	60.3	57.7
Yugoslavia	83.4	99.8	100.0	97.0	94.1	90.9	88.3	86.5	85.3	84.8	89.9	83.8	82.4	80.2	80.4
Baltic states [f]	94.9	99.6	100.0	98.5	98.9	94.3	88.8	82.8	80.1	79.5	80.1	79.7	78.7	77.1	75.6
Estonia	..	97.6	100.0	98.6	96.3	90.9	83.4	80.6	75.6	73.9	73.7	72.4	69.1	68.3	68.9
Latvia	97.0	100.5	100.0	100.1	99.3	92.0	85.6	77.0	74.3	72.3	73.7	74.1	73.8	73.8	73.8
Lithuania	93.4	99.8	100.0	97.3	99.7	97.5	93.4	88.0	86.4	87.2	87.7	87.0	86.6	83.3	80.0
CIS	93.8	98.8	100.0	100.2	98.8	96.6	94.2	91.4	90.2	89.7	88.6	87.3	87.0	..	..
Armenia	86.6	101.4	100.0	102.4	105.0	99.2	97.0	93.5	92.8	90.2	86.2	84.0	81.6	80.3	79.5
Azerbaijan	62.7	75.2	100.0	100.9	101.7	101.4	101.2	98.9	98.4	100.5	100.7	100.9	100.9	100.9	101.2
Belarus	95.4	99.5	100.0	99.1	96.6	94.1	92.9	90.4	84.8	84.0	84.1	85.0	85.5	85.4	85.0
Georgia	92.7	101.1	100.0	102.3	93.3	73.5	66.4	64.8	64.1	75.4	82.7	64.1	64.2	64.8	69.5
Kazakhstan	86.2	96.0	100.0	101.3	100.1	98.3	89.9	85.4	85.0	84.6	84.0	79.5	79.2	80.5	82.6
Kyrgyzstan	81.9	98.7	100.0	100.5	99.6	105.6	96.6	94.6	94.4	95.0	97.1	98.0	101.5	101.7	102.8
Republic of Moldova [g]	97.3	98.9	100.0	99.1	99.0	98.0 │	80.7	80.4	80.0	79.4	78.7	78.5	71.5	72.5	71.7
Russian Federation	96.9	99.9	100.0	99.6	97.7	95.3	93.7	90.6	87.8	87.2	85.6	84.4	84.6	85.1	85.3
Tajikistan	76.7	96.9	100.0	103.2	104.9	101.6	98.7	98.7	98.6	92.1	95.3	95.6	92.5	92.9	93.7
Turkmenistan	79.8	101.2	100.0	103.4	107.0	110.5	114.0	118.5	122.5	124.7	127.2	128.8	133.6	..	..
Ukraine	99.7	100.0	100.0	100.0	98.3	96.4	94.2	90.6	93.3	91.4	88.9	87.9	85.9	83.7	82.4
Uzbekistan	75.4	95.9	100.0	104.2	108.3	108.5	108.3	109.9	110.8	112.3	113.8	115.4	116.5	117.8	119.8
Total above	94.2	99.1	100.0	99.3	97.1	94.0	91.4	89.3	88.3	88.9	88.4	87.5	86.9	..	..
Memorandum items:															
CETE-5	99.7	100.1	100.0	96.7	89.8	85.8	83.6	83.5	84.7	85.8	86.8	87.9	86.3	84.9	84.8
SETE-7	92.3	99.7	100.0	97.6	96.5	89.2	85.6	85.5	82.9	89.9	90.9	90.1	89.2	88.0	..

Source: UNECE Common Database, derived from national and Interstate Statistical Committee of the CIS statistics.

[a] Up to 1991, excluding Bosnia and Herzegovina.

[b] End of year, up to 1992; since 1992, annual average.

[c] End of year, up to 1996; since 1996, annual average, labour force survey data.

[d] End of year, up to 1993; since 1993, annual average.

[e] Self-employed excluded until 1987.

[f] Estonia excluded until 1985.

[g] Excluding Transdniestria since 1993.

APPENDIX TABLE B.6

Employment in industry in eastern Europe, the Baltic states and the CIS, 1989-2001
(Indices, 1989=100)

	1989	*1990*	*1991*	*1992*	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*	*1999*	*2000*	*2001*
Eastern Europe [a]	100.0	95.5	89.1	78.7	73.9	72.0	70.4	71.4	70.6	69.2	65.7	62.6	62.0
Albania	..	..	..	..	..	100.0	85.5	76.8	79.5	75.7	74.1	52.8	49.8
Bosnia and Herzegovina	..	..	100.0	38.7	13.7	15.2	31.1	36.5	44.5	47.9	48.0	48.0	46.1
Bulgaria	100.0	91.0	74.7	64.8	59.5	57.3	56.0	55.4	53.0	50.8	46.1	43.5	41.6
Croatia	100.0	102.4	84.8	70.3	70.4	67.3	59.5	59.0	56.6	60.0	58.3	56.7	55.9
Czech Republic	100.0	95.8	92.2	85.1	80.9	76.6	77.0	76.4	76.1	74.9	72.5	70.6	72.1
Hungary	100.0	97.0	85.4	77.3	69.1	66.0	62.5	61.9	63.0	65.9	66.4	65.6	66.8
Poland	100.0	93.7	86.1	76.7	74.4	73.8	76.2	75.6	75.8	75.0	69.5	65.3	64.3
Romania [b]	100.0	96.5	91.6	79.5	73.0	69.4	65.4	71.7	69.9	66.2	62.0	58.1	57.2
Slovakia	100.0	95.7	88.2	78.7	74.0	71.7	71.6	71.6	70.2	67.3	65.4	63.3	63.9
Slovenia	100.0	95.1	85.2	84.6	78.1	75.1	72.2	71.5	68.5	67.8	66.7	66.3	66.7
The former Yugoslav Republic of Macedonia	100.0	95.3	87.3	81.6	77.5	72.9	63.1	59.0	54.4	52.5	55.4	52.9	50.5
Yugoslavia	100.0	100.9	92.1	87.2	85.0	82.7	80.6	78.8	76.3	72.8	70.5	67.1	64.8
Baltic states	100.0	97.2	95.9	87.3	74.2	62.8	60.3	57.4	57.0	55.0	53.2	53.4	52.6
Estonia	100.0	99.0	94.8	87.0	73.5	69.5	74.1	70.3	65.1	63.6	59.9	61.4	61.5
Latvia	100.0	97.0	92.1	81.4	69.0	56.3	53.1	50.1	51.9	47.6	45.7	46.7	46.7
Lithuania	100.0	96.7	99.0	91.4	78.0	64.5	59.5	57.0	57.1	56.5	55.7	54.6	53.0
CIS	100.0	98.2	96.6	91.6	88.2	79.7	73.2	69.2	63.9	62.7	61.2	..	..
Armenia	100.0	102.6	95.0	84.0	75.2	73.7	62.8	52.9	47.5	43.4	40.5	37.3	35.2
Azerbaijan	100.0	97.1	94.9	88.9	81.1	77.4	72.9	58.6	50.1	52.0	53.6	51.6	51.1
Belarus	100.0	98.6	96.9	92.1	88.5	84.4	75.2	74.4	74.5	75.5	76.2	75.9	75.0
Georgia	100.0	104.2	92.6	66.0	56.5	51.6	46.8	33.6	25.8	28.1	25.7	25.9	15.2
Kazakhstan	100.0	98.5	99.9	96.2	83.6	76.9	69.6	66.9	59.0	57.8	57.9	54.7	53.1
Kyrgyzstan	100.0	99.9	92.7	89.5	80.5	72.0	61.2	54.6	51.2	50.1	47.4	44.0	42.2
Republic of Moldova [c]	100.0	102.4	95.1	93.1	55.0	52.1	44.7	43.8	42.9	40.8	35.9	37.5	37.0
Russian Federation	100.0	97.7	96.1	91.3	89.8	80.7	74.0	70.4	64.5	63.1	62.6	64.0	64.8
Tajikistan	100.0	102.5	100.8	98.2	86.1	81.9	71.9	71.1	62.5	60.1	52.2	47.7	48.2
Turkmenistan	100.0	104.2	100.8	101.0	110.7	110.5	115.4	119.9	132.9	150.2	152.9	..	..
Ukraine	100.0	98.1	97.3	92.7	87.9	78.3	72.2	66.8	61.2	59.3	54.4	51.3	49.4
Uzbekistan	100.0	101.5	99.6	96.9	98.6	90.1	92.3	93.5	93.7	94.1	94.9	96.7	98.0
Total above [a]	100.0	97.4	94.3	87.5	83.4	76.9	72.1	69.7	65.8	64.5	62.4	..	..
Memorandum items:													
CETE-5	100.0	94.9	87.5	79.1	75.1	73.0	73.6	73.1	73.1	72.6	69.2	66.4	66.4
SETE-7 [a]	100.0	96.4	91.1	78.3	72.3	69.3	66.3	69.3	67.5	64.8	61.2	57.4	..

Source: UNECE Common Database, derived from national and Interstate Statistical Committee of the CIS statistics.

[a] Up to 1993, excluding Albania; up to 1991, excluding Bosnia and Herzegovina.

[b] End of year, up to 1996; since 1996, annual average, labour force survey data.

[c] Excluding Transdniestria since 1993.

APPENDIX TABLE B.7

Registered unemployment in eastern Europe, the Baltic states and the CIS, 1990-2001

(Per cent of labour force, end of period)

	1990	*1991*	*1992*	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*	*1999*	*2000*	*2001*
Eastern Europe	..	9.6	12.4	14.0	13.6	12.5	11.7	11.9	12.6	14.6	15.2	15.6*
Albania	9.5	9.2	27.0	22.0	18.0	12.9	12.3	14.9	17.6	18.2	16.9	14.5
Bosnia and Herzegovina	..	..	..	..	..	..	..	39.0	38.7	39.0	39.4	39.9
Bulgaria	1.8	11.1	15.3	16.4	12.8	11.1	12.5	13.7	12.2	16.0	17.9	17.3
Croatia	..	14.1	17.8	16.6	17.3	17.6	15.9	17.6	18.6	20.8	22.6	23.1
Czech Republic	0.7	4.1	2.6	3.5	3.2	2.9	3.5	5.2	7.5	9.4	8.8	8.9
Hungary	1.7	7.4	12.3	12.1	10.9	10.4	10.5	10.4	9.1	9.6	8.9	8.4*
Poland	6.5	12.2	14.3	16.4	16.0	14.9	13.2	10.3	10.4	13.1	15.1	17.4
Romania	1.3	3.0	8.2	10.4	10.9	9.5	6.6	8.8	10.3	11.5	10.5	8.6
Slovakia	1.6	11.8	10.4	14.4	14.8	13.1	12.8	12.5	15.6	19.2	17.9	18.6
Slovenia	..	10.1	13.3	15.5	14.2	14.5	14.4	14.8	14.6	13.0	12.0	11.8
The former Yugoslav Republic of Macedonia	..	24.5	26.2	27.7	30.0	36.6	38.8	41.7	41.4	44*	45*	42*
Yugoslavia [a]	..	21.0	24.6	24.0	23.9	24.7	26.1	25.6	27.2	27.4	26.6	27.9
Baltic states	..	..	2.1	4.5	5.3	6.6	6.4	6.3	7.3	9.1	10.0	10.2
Estonia [b]	..	..	1.6	5.0	5.1	5.0	5.6	4.6	5.1	6.7	7.7	7.7
Latvia	..	..	2.3	5.8	6.5	6.6	7.2	7.0	9.2	9.1	7.8	7.7
Lithuania	..	..	3.5	3.4	4.5	7.3	6.2	6.7	6.9	10.0	12.6	12.9
CIS	..	..	2.7	3.6	4.4	5.8	6.6	7.6	9.0	8.3	7.0	6.2
Armenia	..	..	3.5	6.3	6.0	8.1	9.7	11.0	8.9	11.5	10.9	9.8
Azerbaijan	..	..	0.2	0.7	0.9	1.1	1.1	1.3	1.4	1.2	1.2	1.3
Belarus	..	..	0.5	1.3	2.1	2.7	4.0	2.8	2.3	2.0	2.1	2.3
Georgia	..	..	0.3	2.0	3.8	3.4	3.2	8.0	4.2	5.6	..	..
Kazakhstan	..	..	0.4	0.6	1.0	2.1	4.1	3.9	3.7	3.9	3.7	2.8
Kyrgyzstan	..	..	0.1	0.2	0.8	3.0	4.5	3.1	3.1	3.0	3.1	3.1
Republic of Moldova	..	..	0.7	0.7	1.0	1.4	1.5	1.7	1.9	2.1	1.8	1.7
Russian Federation [c]	..	..	5.2	6.1	7.8	9.0	10.0	11.2	13.3	12.2	9.8	8.7
Tajikistan	..	..	0.4	1.1	1.8	1.8	2.4	2.8	2.9	3.1	3.0	2.6
Turkmenistan	..	..	..	..	..	..	..	..	..	..	..	..
Ukraine	..	..	0.3	0.4	0.3	0.6	1.5	2.8	4.3	4.3	4.2	3.7
Uzbekistan	..	..	0.1	0.2	0.3	0.3	0.3	0.3	0.4	0.5	0.6	..
Memorandum items:												
CETE-5	..	9.7	11.3	13.3	12.9	12.0	11.2	9.8	10.2	12.5	13.4	14.7
SETE-7	..	9.3	14.2	15.1	14.6	13.7	12.5	14.3	15.4	17.1	17.8	16.9*
Russian Federation [d]	..	0.1	0.8	1.1	2.1	3.2	3.4	2.8	2.7	1.7	1.4	1.6
Former-GDR	..	..	13.5	15.4	13.5	14.9	15.9	19.4	17.4	17.7	17.2	17.6

Source: UNECE Common Database, derived from national and Interstate Statistical Committee of the CIS statistics.

Note: Aggregates for eastern European countries until 1997 exclude Bosnia and Herzegovina.

[a] Since 1999, excluding Kosovo and Metohia.

[b] Job seekers until October 2000, thereafter – registered unemployed as percentage of the labour force.

[c] Based on Russian Federation Goskomstat's monthly estimates according to the ILO definition, i.e. including all persons not having employment but actively seeking work.

[d] Registered unemployment.

APPENDIX TABLE B.8

Consumer prices in eastern Europe, the Baltic states and the CIS, 1990-2001

(Annual average, percentage change over preceding year)

	1990	*1991*	*1992*	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*	*1999*	*2000*	*2001*
Albania	..	35.5	193.1	85.0	21.5	8.0	12.7	33.1	20.3	- 0.1	–	3.1
Bosnia and Herzegovina	594.0	116.2	64 218.3	38 825.1	553.5	- 12.1	- 21.2	11.8	4.9	- 0.6	1.7	1.8
Bulgaria	23.8	338.5	91.3	72.9	96.2	62.0	121.7	1 058.3	18.7	2.6	10.2	7.3
Croatia [a]	597.1	124.2	663.6	1 516.6	97.5	2.0	3.6	3.7	5.9	4.3	6.4	5.0
Czech Republic	9.9	56.7	11.1	20.8	10.0	9.1	8.9	8.4	10.6	2.1	3.9	4.7
Hungary	28.9	35.0	23.0	22.6	19.1	28.5	23.6	18.4	14.2	10.1	9.9	9.2
Poland	585.8	70.3	45.3	36.9	33.2	28.1	19.8	15.1	11.7	7.4	10.2	5.5
Romania	5.1	170.2	210.7	256.2	137.1	32.2	38.8	154.9	59.3	45.9	45.7	34.5
Slovakia	10.4	61.2	10.2	23.1	13.4	10.0	6.1	6.1	6.7	10.5	12.0	7.0
Slovenia	551.6	115.0	207.3	31.7	21.0	13.5	9.9	8.4	8.1	6.3	9.0	8.6
The former Yugoslav Republic of Macedonia [a]	596.6	110.8	1 511.0	352.0	126.6	16.4	2.5	0.9	- 1.4	- 1.3	6.6	5.2
Yugoslavia	580.0	122.0	8 926.0	2.2E+14	7.9E+10	71.8	90.5	23.2	30.4	44.1	77.5	90.4
Estonia	18.0	202.0	1 078.2	89.6	47.9	28.9	23.1	11.1	10.6	3.5	3.9	5.8
Latvia	10.9	172.2	951.2	109.1	35.7	25.0	17.7	8.5	4.7	2.4	2.8	2.4
Lithuania	9.1	216.4	1 020.5	410.1	72.0	39.5	24.7	8.8	5.1	0.8	1.0	1.5
Armenia	6.9	174.1	728.7	3 731.8	4 964.0	175.5	18.7	13.8	8.7	0.7	- 0.8	3.2
Azerbaijan	6.1	106.6	912.6	1 129.7	1 663.9	411.5	19.8	3.6	- 0.8	- 8.6	1.8	1.5
Belarus	4.7	94.1	971.2	1 190.9	2 219.6	709.3	52.7	63.9	73.2	293.7	168.9	61.4
Georgia	4.2	78.7	1 176.9	4 084.9	22 286.1	261.4	39.4	7.1	3.5	19.3	4.2	4.6
Kazakhstan	5.6	114.5	1 504.3	1 662.7	1 880.1	176.3	39.2	17.5	7.3	8.4	13.4	8.5
Kyrgyzstan	5.5	113.9	854.6	1 208.7	278.1	42.9	31.3	23.4	10.3	35.7	18.7	7.0
Republic of Moldova	5.7	114.4	1 308.0	1 751.0	486.4	29.9	23.5	11.8	7.7	39.3	31.3	9.8
Russian Federation	5.2	160.0	1 528.7	875.0	309.0	197.4	47.8	14.7	27.8	85.7	20.8	21.6
Tajikistan	5.9	112.9	822.0	2 884.8	350.3	682.1	422.4	85.4	43.1	27.5	32.9	38.6
Turkmenistan	5.7	88.5	483.2	3 128.4	2 562.1	1 105.3	714.0	83.7	16.8	..	..	..
Ukraine	5.4	94.0	1 485.8	4 734.9	891.2	376.7	80.2	15.9	10.6	22.7	28.2	12.0
Uzbekistan	5.8	97.3	414.5	1 231.8	1 550.0	76.5	54.0	58.8	17.7	29.0	24.9	..

Source: UNECE Common Database, derived from national statistics.

Note: From 1992 onwards indices derived from monthly data except for Armenia, Georgia, Hungary, Slovenia and Yugoslavia (from 1993); Turkmenistan (from 1995); and Uzbekistan (from 1996); retail prices for Bulgaria and the CIS countries for 1989.

[a] Retail prices.

APPENDIX TABLE B.9

Producer price indices in eastern Europe, the Baltic states and the CIS, 1990-2001

(Annual average, percentage change over preceding year)

	1990	*1991*	*1992*	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*	*1999*	*2000*	*2001*
Albania	..	..	..	..	..	..	..	..	..	..	..	..
Bosnia and Herzegovina	..	129.5	70 374.7	10 967.6	1 184.8	68.7	-4.8	3.2	3.6	4.3	0.9	2.3
Bulgaria	14.7	296.4	56.1	28.3	59.1	48.9	129.7	888.1	19.9	3.3	17.0	4.5
Croatia	455.3	146.3	826.0	1 510.4	77.7	0.8	1.3	3.7	-1.5	2.5	9.6	3.4
Czech Republic	2.5	70.4	10.8	9.3	5.1	7.7	4.9	5.1	4.9	1.1	5.1	3.0
Hungary	22.0	32.6	12.3	14.1	12.3	28.5	22.3	20.9	11.4	5.0	11.4	5.7
Poland	622.4	40.9	28.0	32.6	31.0	26.0	13.4	12.2	7.2	5.7	7.8	1.7
Romania	26.9	220.1	184.8	165.0	140.7	35.3	50.0	144.0	33.2	41.2	53.4	41.0
Slovakia	5.2	68.9	5.3	17.0	10.0	9.1	4.0	4.6	3.3	3.7	9.8	5.9
Slovenia	390.4	124.1	215.7	23.3	17.8	12.4	6.7	6.1	6.0	2.2	7.7	9.0
The former Yugoslav Republic of Macedonia	394.0	112.0	2 193.5	258.6	88.6	4.7	–	4.0	3.5	-0.1	9.1	2.8
Yugoslavia	468.0	124.0	8 993.0	1.4E+13	7.9E+10	75.7	88.8	20.6	25.9	43.3	105.4	84.4
Estonia	19.3	208.4	1 208.0	75.2	36.1	25.5	14.7	8.8	4.1	-1.3	4.9	4.5
Latvia	..	192.0	1 310.0	117.1	17.0	12.0	13.8	4.3	2.0	-4.0	0.8	1.6
Lithuania	..	148.2	1 510.0	391.7	44.7	28.7	16.5	5.0	-4.6	3.3	17.8	-1.5
Armenia	2.0	120.0	947.0	892.0	4 394.4	187.8	36.3	21.7	6.0	4.1	-0.4	1.1
Azerbaijan	..	179.5	7 453.6	1 974.0	3 971.6	1 340.1	70.6	11.4	-5.5	-1.3	9.4	-2.6
Belarus	2.1	151.1	1 939.2	1 536.3	3 362.1	538.6	35.7	89.4	72.8	355.7	185.6	71.8
Georgia	..	..	..	..	..	..	..	..	2.2	15.5	5.8	3.6
Kazakhstan	..	193.0	2 465.1	1 042.8	2 918.5	139.7	23.8	15.6	0.8	19.0	38.0	0.4
Kyrgyzstan	..	160.0	1 664.0	831.0	72.9	34.0	29.1	34.8	12.7	51.7	31.7	12.1
Republic of Moldova	..	130.0	1 210.9	1 078.5	711.7	52.2	30.2	14.9	9.7	47.1	33.6	12.6
Russian Federation	3.9	240.0	3 280.0	900.0	340.0	237.6	50.8	15.0	7.0	59.1	46.5	19.1
Tajikistan	..	163.0	1 316.5	1 080.0	665.5	351.7	340.7	103.7	28.4	45.6	39.0	25.1
Turkmenistan	..	211.0	994.0	1 610.0	911.0	296.5	2 974.9	260.6	-30.5	..	..	..
Ukraine	..	163.4	4 128.5	9 667.5	1 134.5	488.9	52.1	7.8	13.2	31.1	20.8	8.6
Uzbekistan	..	147.0	1 296.0	1 119.0	2 162.6	792.5	128.5	53.9	40.0	38.0	61.1	..

Source: UNECE Common Database, derived from national statistics.

Note: From 1994 onwards indices derived from monthly data except: Bosnia and Herzegovina, Croatia, Czech Republic, Poland, The former Yugoslav Republic of Macedonia (from 1992); Hungary, Romania, Slovakia, Slovenia (from 1993); Turkmenistan, Yugoslavia (from 1995).

APPENDIX TABLE B.10

Nominal gross wages in industry in eastern Europe, the Baltic states and the CIS, 1990-2001

(Annual average, percentage change over preceding year)[a]

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Albania[b]	..	..	..	69.5	34.5	29.3	..	..	20.4	10.4	17.7	15.1
Bosnia and Herzegovina[c]	..	..	..	..	..	..	253.6	50.8	31.1	15.4	12.1	..
Bulgaria	20.8	175.5	132.8	55.1	53.9	57.7	90.4	882.9	34.5	..	..	..
Croatia[c]	453.7	40.7	466.7	1 444.1	130.5	44.0	11.8	16.3	10.6	10.1	7.9	9.6
Czech Republic	3.0	16.5	21.0	22.6	16.9	18.3	17.7	11.9	10.7	6.7	7.1	7.1
Hungary[b]	27.2	33.4	24.3	24.9	23.3	19.1	21.7	21.8	16.6	13.5	15.0	14.4
Poland[c]	365.5	64.0	41.2	37.8	39.8	30.1	25.8	19.9	14.1	35.7	9.6	..
Romania[c]	9.7	125.0	173.5	210.7	139.4	55.3	56.7	99.5	49.3	40.7	48.9	..
Slovakia[b]	2.4	17.2	16.9	23.1	17.7	15.2	14.6	9.3	9.7	7.9	9.3	10.2
Slovenia	361.5	68.4	196.7	45.1	27.1	17.1	14.0	12.1	10.7	9.3	11.6	10.9
The former Yugoslav Republic of Macedonia[c]	433.6	79.2	1 083.7	454.0	105.8	11.1	3.6	2.3	3.1	1.5	6.2	..
Yugoslavia[c]	400.0	100.6	4 886.4	-62.5	229.6	74.1	74.5	41.7	39.6	24.6	113.5	..
Estonia[d]	..	122.2	570.3	93.3	71.3	34.6	23.8	19.7	13.2	0.9	..	..
Latvia	..	104.5	609.8	112.0	60.0	24.1	14.9	21.6	6.5	4.0	3.2	5.1
Lithuania	15.3	183.9	632.5	246.1	70.0	43.2	34.0	21.7	12.0	-0.4	-0.7	..
Armenia	5.9	31.8	352.3	739.1	3 640.2	210.9	62.3	41.7	20.5	15.2	19.5	23.4
Azerbaijan	4.4	82.9	870.4	700.8	575.7	354.8	53.0	58.2	19.8	18.1	33.3	..
Belarus	14.1	112.1	910.9	1 073.8	69.6	618.7	58.5	96.8	109.4	323.9	197.1	101.8
Georgia	6.0	33.9	457.3	-97.8	23 327.5	-99.8	145.4	12.7	26.8	18.6	..	..
Kazakhstan	11.0	80.5	1 053.1	993.1	1 542.5	178.2	30.9	22.5	7.8	21.6	26.1	15.5
Kyrgyzstan	0.5	62.1	773.1	615.1	176.3	54.8	29.1	60.3	20.0	43.2	2.4	..
Republic of Moldova	14.2	90.1	815.0	773.0	284.4	43.8	32.2	24.9	16.6	22.5	31.8	..
Russian Federation	13.0	94.9	1 065.7	798.2	260.2	131.4	64.3	21.6	14.3	52.2	48.8	52.0
Tajikistan	8.0	76.2	550.2	917.5	142.2	145.2	425.3	71.9	96.4	26.4	31.5	..
Turkmenistan	..	83.8	1 010.1	1 467.7	622.2	686.2	915.3	121.5	27.1	..	..	..
Ukraine	39.0	107.9	1 419.0	2 286.1	737.8	408.5	71.5	13.5	5.9	18.1	40.2	..
Uzbekistan	..	82.3	706.1	1 159.3	806.8	278.4	99.8	76.3	60.3	50.0	..	..

Source: UNECE Common Database, derived from national statistics.

[a] Calculated from reported annual average wages.

[b] Gross wages in total economy. For Hungary for 1990-1992; for Slovakia for 1990-1991.

[c] Net wages in industry. For Poland and Romania for 1990-1992.

[d] Manufacturing for 1991-1993.

APPENDIX TABLE B.11

Merchandise exports of eastern Europe, the Baltic states and the CIS, 1980, 1989-2001

(Billion dollars)

	1980	*1989*	*1990*	*1991*	*1992*	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*	*1999*	*2000*	*2001*
Eastern Europe	56.367	63.850	61.733	57.241	59.333	62.675	72.937	94.777	100.206	107.428	119.174	117.858	133.042	147.222
Albania	0.320	0.302	0.231	0.101	0.072	0.123	0.139	0.202	0.213	0.137	0.207	0.352	0.260	0.305
Bulgaria	7.160	6.651	5.232	3.433	3.992	3.769	3.935	5.345	4.890	4.940	4.194	4.006	4.825	5.113
Czechoslovakia	10.475	11.988	10.728	11.319	..	..	..	..	..	..	..	..	..	..
Czech Republic	..	..	..	..	8.767	14.463	15.882	21.273	22.180	22.779	26.351	26.265	29.052	33.369
Slovakia	..	..	..	..	3.500	5.458	6.714	8.585	8.822	9.640	10.775	10.277	11.908	12.691
Hungary	8.609	9.673	9.731	10.226	10.681	8.921	10.701	12.867	15.704	19.100	23.005	25.012	28.092	30.498
Poland	13.071	14.665	18.291	14.912	13.187	14.202	17.240	22.887	24.440	25.756	28.229	27.407	31.651	36.092
Romania	9.217	8.076	4.570	4.266	4.363	4.892	6.151	7.910	8.085	8.431	8.302	8.487	10.367	11.385
Yugoslavia (SFR)	7.514	12.496	12.950	12.984	14.772	..	..	..	..	..	..	..	..	..
Bosnia and Herzegovina	..	2.100	1.850	..	..	..	..	0.024	0.058	0.193	0.352	0.518	0.675	0.799
Croatia	..	2.600	4.020	3.310	4.353	3.709	4.260	4.633	4.512	4.171	4.541	4.302	4.432	4.659
Slovenia	1.836	3.408	4.118	3.874	6.681	6.083	6.828	8.316	8.310	8.369	9.050	8.546	8.732	9.252
The former Yugoslav Republic of Macedonia	..	0.654	1.113	1.095	1.199	1.055	1.086	1.204	1.147	1.237	1.311	1.191	1.319	1.155
Yugoslavia	..	4.461	4.651	4.704	2.539	..	..	1.531	1.846	2.677	2.858	1.493	1.730	1.903
Baltic states	..	..	..	..	2.139	4.197	4.324	5.844	6.877	8.467	8.759	7.665	8.851	9.890
Estonia	..	..	..	..	0.444	0.802	1.305	1.838	2.079	2.934	3.236	2.938	3.176	3.305
Latvia	..	..	..	..	0.843	1.401	0.988	1.304	1.443	1.673	1.812	1.723	1.865	2.001
Lithuania	..	..	..	..	0.852	1.994	2.031	2.705	3.355	3.860	3.711	3.004	3.809	4.583
CIS: total	..	..	..	..	..	..	89.991	110.622	121.936	122.913	104.716	104.179	143.691	143.474*
CIS: non-CIS	..	..	..	..	51.242	52.547	62.652	80.007	87.897	88.698	76.757	82.346	114.949	113.613*
Armenia	..	..	..	..	..	0.156	0.216	0.271	0.290	0.233	0.221	0.232	0.301	0.339
Non-CIS	..	..	..	..	0.026	0.029	0.058	0.101	0.162	0.138	0.140	0.175	0.227	0.252
Azerbaijan	..	..	..	..	1.484	0.725	0.653	0.637	0.631	0.781	0.606	0.929	1.745	2.314
Non-CIS	..	..	..	..	0.754	0.351	0.378	0.352	0.341	0.403	0.374	0.718	1.510	2.091
Belarus	..	..	..	..	..	..	2.510	4.707	5.652	7.301	7.070	5.909	7.331	7.428
Non-CIS	..	..	..	..	1.194	0.789	1.031	1.777	1.888	1.922	1.910	2.287	2.927	2.956
Georgia	..	..	..	..	..	..	0.156	0.154	0.199	0.240	0.193	0.238	0.330	0.320
Non-CIS	..	..	..	..	0.068	0.069	0.039	0.057	0.070	0.102	0.085	0.131	0.198	0.176
Kazakhstan	..	..	..	..	..	..	3.231	5.250	5.911	6.497	5.436	5.592	9.126	8.647
Non-CIS	..	..	..	..	1.398	1.501	1.357	2.366	2.732	3.515	3.266	4.100	6.750	6.015
Kyrgyzstan	..	..	..	..	0.317	0.396	0.340	0.409	0.505	0.604	0.514	0.454	0.505	0.476
Non-CIS	..	..	..	..	0.077	0.112	0.117	0.140	0.112	0.285	0.283	0.271	0.297	0.308
Republic of Moldova	..	..	..	..	0.470	0.483	0.565	0.746	0.795	0.875	0.632	0.464	0.472	0.570
Non-CIS	..	..	..	..	0.166	0.178	0.159	0.279	0.252	0.267	0.203	0.211	0.196	0.224
Russian Federation [a]	..	..	..	..	..	..	66.862	79.869	86.889	86.627	73.000	73.700	102.796	100.653*
Non-CIS	..	..	..	..	42.376	44.297	53.001	65.607	70.975	69.959	58.800	62.800	89.068	86.213*
Tajikistan	..	..	..	..	0.193	0.350	0.492	0.749	0.770	0.746	0.597	0.689	0.784	0.652
Non-CIS	..	..	..	..	0.109	0.227	0.399	0.497	0.439	0.473	0.394	0.374	0.411	0.440
Turkmenistan	..	..	..	..	..	..	2.145	1.881	1.682	0.751	0.594	1.190	2.500	2.700
Non-CIS	..	..	..	..	0.908	1.049	0.494	0.951	0.610	0.300	0.442	0.700	1.200	1.300
Ukraine	..	..	..	..	7.415	7.817	10.272	13.128	14.401	14.232	12.637	11.582	14.573	16.265
Non-CIS	..	..	..	..	3.297	3.223	4.653	6.168	6.996	8.646	8.435	8.329	10.075	11.589
Uzbekistan	..	..	..	..	..	..	2.549	2.821	4.211	4.026	3.218	3.200	3.230	3.110
Non-CIS	..	..	..	..	0.869	0.721	0.966	1.712	3.321	2.689	2.425	2.250	2.090	2.050
Former Soviet Union	57.942	62.286	59.056	46.660	..	..	..	..	..	..	..	..	..	..
Total	114.310	126.136	120.788	103.901	112.714	119.419	167.252	211.243	229.019	238.808	232.649	229.702	285.584	300.585*

Source: UNECE secretariat, based on national statistical publications and direct communications from national statistical offices.

Note: Trade flows reported include the "new trade" among members of the dissolved federal states: former Czechoslovakia (from 1993), the former SFR of Yugoslavia (from 1992) and the former USSR: for the Baltic states (from 1992) and for the CIS. Data excluding the "new trade" were shown in earlier issues of this publication. Changes in the method of recording trade are reflected from 1993 in data for the Czech Republic (inclusion of OPT transactions, etc.), from 1995 in Latvia (imports registered c.i.f.) and Lithuania (change from special to general system), from 1996 in Hungary (inclusion of trade flows of free trade zones), from 1997 in Slovakia (inclusion of OPT transactions, etc.) and from 2000 in Estonia (change from general to special trade system).

As from 1991, all trade values are expressed in dollars at prevailing market exchange rates. For earlier years, values reported in national currencies were adjusted by the ECE secretariat to remove distortions stemming from mutually inconsistent national rouble/dollar cross-rates in the valuation of the then important intra-CMEA trade flows. For details on the revaluation, see the note to table 2.1.3 and the discussion in box 2.1.1 in UNECE, *Economic Bulletin for Europe*, Vol. 43 (1991).

[a] Russian Goskomstat data excluding trade by physical persons (shuttle trade), but including trade flows not crossing the Russian borders such as off-board fish sales and natural gas deliveries under debt repayment agreements with former CMEA countries.

APPENDIX TABLE B.12

Merchandise imports of eastern Europe, the Baltic states and the CIS, 1980, 1989-2001

(Billion dollars)

	1980	*1989*	*1990*	*1991*	*1992*	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*	*1999*	*2000*	*2001*
Eastern Europe	65.443	61.185	63.408	61.610	68.388	76.285	86.128	117.026	135.887	146.195	159.491	155.665	172.582	187.331
Albania	0.320	0.385	0.381	0.409	0.524	0.421	0.549	0.650	0.913	0.620	0.795	0.903	1.059	1.317
Bulgaria	6.321	7.325	5.584	2.700	4.530	5.120	4.272	5.638	5.074	4.932	4.957	5.515	6.507	7.261
Czechoslovakia	10.619	11.772	11.808	10.962										
Czech Republic	..	..	..	..	10.368	14.617	17.427	25.265	27.919	27.563	28.789	28.126	32.183	36.504
Slovakia	..	..	..	..	3.889	6.332	6.634	8.777	11.112	11.622	13.006	11.265	12.660	14.686
Hungary	9.188	8.863	8.797	11.449	11.123	12.648	14.554	15.466	18.144	21.234	25.706	28.008	32.080	33.682
Poland	14.705	12.941	12.619	15.531	16.141	18.758	21.566	29.043	37.137	42.314	47.054	45.911	48.940	50.275
Romania	11.061	5.834	6.889	5.793	6.260	6.522	7.109	10.278	11.435	11.280	11.838	10.557	13.055	15.552
Yugoslavia (SFR)	13.229	14.064	17.330	14.765										
Bosnia and Herzegovina	..	1.850	1.750	..	..	..	..	0.524	1.204	1.555	2.120	2.431	2.290	2.340
Croatia	..	3.750	5.133	3.811	4.346	4.166	5.229	7.510	7.788	9.104	8.383	7.799	7.887	9.044
Slovenia	2.463	3.216	4.727	4.131	6.141	6.501	7.304	9.492	9.421	9.367	10.098	10.083	10.116	10.148
The former Yugoslav Republic of Macedonia	..	0.934	1.531	1.274	1.206	1.199	1.484	1.719	1.627	1.779	1.915	1.776	2.085	1.688
Yugoslavia	..	5.383	6.701	5.548	3.859	..	..	2.665	4.113	4.826	4.830	3.290	3.721	4.837
Baltic states	..	..	..	..	1.802	4.101	5.251	8.006	10.110	12.809	13.768	11.888	12.901	14.151
Estonia	..	..	..	..	0.406	0.896	1.659	2.540	3.231	4.441	4.786	4.108	4.256	4.291
Latvia	..	..	..	..	0.794	0.961	1.240	1.818	2.320	2.724	3.189	2.946	3.189	3.507
Lithuania	..	..	..	..	0.602	2.244	2.352	3.649	4.559	5.644	5.794	4.834	5.457	6.353
CIS: total	..	..	..	..	..	..	63.137	79.576	86.960	94.316	81.747	62.005	70.693	81.729*
CIS: non-CIS	..	..	..	..	42.297	33.696	36.743	45.678	49.205	57.780	50.560	37.571	38.652	48.875*
Armenia	..	..	..	..	..	0.255	0.394	0.674	0.856	0.892	0.902	0.811	0.885	0.869
Non-CIS	..	..	..	..	0.050	0.087	0.188	0.340	0.578	0.593	0.672	0.624	0.711	0.655
Azerbaijan	..	..	..	..	0.940	0.629	0.778	0.668	0.961	0.794	1.077	1.036	1.172	1.431
Non-CIS	..	..	..	..	0.333	0.241	0.292	0.440	0.621	0.443	0.673	0.711	0.797	0.986
Belarus	..	..	..	..	..	..	3.066	5.564	6.939	8.689	8.549	6.674	8.574	8.049
Non-CIS	..	..	..	..	0.843	1.119	0.974	1.887	2.369	2.872	2.995	2.385	2.551	2.443
Georgia	..	..	..	..	..	..	0.338	0.385	0.687	0.944	0.884	0.602	0.651	0.684
Non-CIS	..	..	..	..	0.228	0.167	0.066	0.231	0.417	0.603	0.617	0.377	0.423	0.433
Kazakhstan	..	..	..	..	..	..	3.561	3.807	4.241	4.301	4.350	3.687	5.051	6.363
Non-CIS	..	..	..	..	0.469	0.494	1.384	1.154	1.295	1.969	2.290	2.089	2.295	3.057
Kyrgyzstan	..	..	..	..	0.421	0.448	0.317	0.522	0.838	0.709	0.842	0.600	0.554	0.467
Non-CIS	..	..	..	..	0.071	0.112	0.107	0.168	0.351	0.273	0.401	0.341	0.256	0.210
Republic of Moldova	..	..	..	..	0.640	0.628	0.659	0.841	1.072	1.172	1.024	0.587	0.776	0.897
Non-CIS	..	..	..	..	0.179	0.184	0.183	0.272	0.420	0.567	0.584	0.345	0.517	0.557
Russian Federation[a]	..	..	..	..	..	..	38.661	46.709	47.373	53.568	44.600	31.000	33.769	41.237*
Non-CIS	..	..	..	..	36.984	26.807	28.344	33.117	32.798	39.365	32.500	22.200	22.171	30.121*
Tajikistan	..	..	..	..	0.254	0.630	0.547	0.810	0.668	0.750	0.711	0.663	0.675	0.688
Non-CIS	..	..	..	..	0.132	0.374	0.314	0.332	0.285	0.268	0.265	0.148	0.115	0.150
Turkmenistan	..	..	..	..	..	..	1.468	1.364	1.011	1.183	1.008	1.500	1.780	2.250
Non-CIS	..	..	..	..	0.030	0.501	0.782	0.619	0.450	0.531	0.530	1.000	1.100	1.400
Ukraine	..	..	..	..	6.892	9.533	10.745	15.484	17.603	17.128	14.676	11.846	13.956	15.775
Non-CIS	..	..	..	..	2.049	2.652	2.907	5.488	6.427	7.249	6.779	5.103	5.916	6.943
Uzbekistan	..	..	..	..	..	..	2.603	2.748	4.712	4.186	3.125	3.000	2.850	3.020
Non-CIS	..	..	..	..	0.929	0.958	1.202	1.630	3.195	3.047	2.256	2.250	1.800	1.920
Former Soviet Union	52.218	64.983	64.963	45.405										
Total	117.661	126.168	128.371	106.901	112.487	114.082	154.516	204.609	232.957	253.320	255.006	229.558	256.176	283.211*

Source: UNECE secretariat, based on national statistical publications and direct communications from national statistical offices.

Note: See appendix table B.11.

[a] Russian Goskomstat data excluding trade by physical persons (shuttle trade), but including trade flows not crossing the Russian borders such as off-board fish sales and natural gas deliveries under debt repayment agreements with former CMEA countries.

APPENDIX TABLE B.13

Balance of merchandise trade of eastern Europe, the Baltic states and the CIS, 1980, 1989-2001
(Billion dollars)

	1980	*1989*	*1990*	*1991*	*1992*	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*	*1999*	*2000*	*2001*
Eastern Europe	-9.076	2.665	-1.675	-4.369	-9.055	-13.610	-13.190	-22.250	-35.680	-38.767	-40.317	-37.806	-39.540	-40.109
Albania	0.000	-0.083	-0.150	-0.308	-0.452	-0.298	-0.410	-0.448	-0.701	-0.483	-0.589	-0.551	-0.800	-1.012
Bulgaria	0.839	-0.674	-0.352	0.732	-0.538	-1.352	-0.336	-0.293	-0.184	0.008	-0.763	-1.509	-1.683	-2.148
Czechoslovakia	-0.144	0.216	-1.080	0.356	..	..	..	..	..	..	..	..	..	..
Czech Republic	..	..	..	..	-1.601	-0.154	-1.545	-3.992	-5.739	-4.784	-2.438	-1.861	-3.131	-3.135
Slovakia	..	..	..	..	-0.389	-0.874	0.080	-0.192	-2.290	-1.983	-2.231	-0.988	-0.752	-1.994
Hungary	-0.579	0.810	0.934	-1.223	-0.442	-3.727	-3.853	-2.599	-2.440	-2.134	-2.701	-2.996	-3.988	-3.184
Poland	-1.634	1.724	5.672	-0.619	-2.955	-4.555	-4.326	-6.156	-12.697	-16.558	-18.825	-18.504	-17.289	-14.183
Romania	-1.844	2.242	-2.320	-1.528	-1.897	-1.630	-0.958	-2.368	-3.351	-2.849	-3.536	-2.070	-2.688	-4.167
Yugoslavia (SFR)	-5.715	-1.568	-4.380	-1.780	14.772	..	..	..	..	..	..	..	..	..
Bosnia and Herzegovina	..	0.250	0.100	..	..	..	..	-0.500	-1.146	-1.362	-1.768	-1.913	-1.615	-1.541
Croatia	..	-1.150	-1.113	-0.501	0.007	-0.457	-0.969	-2.877	-3.276	-4.933	-3.842	-3.496	-3.455	-4.384
Slovenia	-0.626	0.192	-0.609	-0.257	0.540	-0.418	-0.476	-1.176	-1.111	-0.998	-1.048	-1.537	-1.384	-0.895
The former Yugoslav Republic of Macedonia	..	-0.280	-0.418	-0.179	-0.007	-0.144	-0.398	-0.515	-0.480	-0.542	-0.604	-0.585	-0.766	-0.533
Yugoslavia	..	-0.922	-2.050	-0.844	-1.320	..	..	-1.134	-2.267	-2.149	-1.972	-1.797	-1.991	-2.934
Baltic states	..	..	..	..	0.337	0.096	-0.927	-2.162	-3.232	-4.343	-5.009	-4.224	-4.050	-4.261
Estonia	..	..	..	..	0.038	-0.094	-0.353	-0.702	-1.152	-1.507	-1.550	-1.170	-1.080	-0.985
Latvia	..	..	..	..	0.049	0.440	-0.252	-0.514	-0.877	-1.051	-1.377	-1.223	-1.323	-1.506
Lithuania	..	..	..	..	0.250	-0.250	-0.322	-0.944	-1.204	-1.784	-2.083	-1.831	-1.647	-1.770
CIS: total	..	..	..	..	..	..	26.854	31.046	34.975	28.597	22.970	42.174	72.998	61.744*
CIS: non-CIS	..	..	..	..	8.945	18.851	25.909	34.329	38.692	30.919	26.197	44.775	76.297	64.738*
Armenia	..	..	..	..	..	-0.099	-0.178	-0.403	-0.566	-0.660	-0.682	-0.580	-0.584	-0.530
Non-CIS	..	..	..	..	-0.024	-0.058	-0.130	-0.239	-0.416	-0.455	-0.532	-0.449	-0.484	-0.403
Azerbaijan	..	..	..	..	0.544	0.096	-0.125	-0.031	-0.330	-0.013	-0.471	-0.107	0.573	0.883
Non-CIS	..	..	..	..	0.421	0.110	0.086	-0.088	-0.280	-0.040	-0.299	0.007	0.713	1.106
Belarus	..	..	..	..	..	..	-0.556	-0.857	-1.287	-1.388	-1.480	-0.765	-1.244	-0.621
Non-CIS	..	..	..	..	0.351	-0.330	0.057	-0.110	-0.481	-0.950	-1.085	-0.098	0.376	0.513
Georgia	..	..	..	..	..	..	-0.182	-0.231	-0.488	-0.704	-0.692	-0.364	-0.321	-0.364
Non-CIS	..	..	..	..	-0.160	-0.098	-0.027	-0.174	-0.347	-0.501	-0.532	-0.246	-0.226	-0.258
Kazakhstan	..	..	..	..	..	..	-0.330	1.443	1.670	2.196	1.086	1.906	4.075	2.284
Non-CIS	..	..	..	..	0.929	1.007	-0.027	1.212	1.437	1.547	0.976	2.011	4.456	2.958
Kyrgyzstan	..	..	..	..	-0.104	-0.052	0.023	-0.113	-0.333	-0.105	-0.328	-0.146	-0.050	0.009
Non-CIS	..	..	..	..	0.005	0.000	0.010	-0.028	-0.239	0.012	-0.118	-0.070	0.041	0.097
Republic of Moldova	..	..	..	..	-0.170	-0.145	-0.094	-0.095	-0.277	-0.297	-0.392	-0.123	-0.305	-0.327
Non-CIS	..	..	..	..	-0.013	-0.006	-0.024	0.007	-0.168	-0.300	-0.381	-0.134	-0.321	-0.333
Russian Federation[a]	..	..	..	..	..	..	28.201	33.160	39.516	33.059	28.400	42.700	69.027	59.416*
Non-CIS	..	..	..	..	5.392	17.490	24.657	32.490	38.177	30.594	26.300	40.600	66.897	56.091*
Tajikistan	..	..	..	..	-0.061	-0.280	-0.055	-0.061	0.102	-0.004	-0.114	0.026	0.109	-0.036
Non-CIS	..	..	..	..	-0.023	-0.147	0.085	0.165	0.154	0.205	0.129	0.225	0.295	0.290
Turkmenistan	..	..	..	..	..	..	0.677	0.517	0.670	-0.432	-0.414	-0.310	0.720	0.450
Non-CIS	..	..	..	..	0.878	0.548	-0.288	0.332	0.160	-0.231	-0.088	-0.300	0.100	-0.100
Ukraine	..	..	..	..	0.523	-1.716	-0.473	-2.356	-3.202	-2.896	-2.038	-0.265	0.617	0.490
Non-CIS	..	..	..	..	1.248	0.571	1.746	0.680	0.569	1.397	1.657	3.227	4.159	4.646
Uzbekistan	..	..	..	..	..	..	-0.054	0.073	-0.501	-0.159	0.093	0.200	0.380	0.090
Non-CIS	..	..	..	..	-0.060	-0.237	-0.236	0.082	0.126	-0.358	0.169	0.000	0.290	0.130
Former Soviet Union	5.724	-2.697	-5.907	1.255										
Total	-3.351	-0.032	-7.583	-3.000	0.227	5.337	12.736	6.634	-3.937	-14.512	-22.357	0.144	29.408	17.374*

Source: UNECE secretariat, based on national statistical publications and direct communications from national statistical offices.

Note: See appendix table B.11.

[a] Russian Goskomstat data excluding trade by physical persons (shuttle trade), but including trade flows not crossing the Russian borders such as off-board fish sales and natural gas deliveries under debt repayment agreements with former CMEA countries.

APPENDIX TABLE B.14

Merchandise trade of eastern Europe and the Russian Federation, by direction, 1980, 1989-2001

(Shares in total trade, per cent)

	1980	*1989*	*1990*	*1991*	*1992*	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*	*1999*	*2000*	*2001*
Eastern Europe, *to and from:*														
Exports														
World	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
ECE transition economies	48.5	44.4	38.1	28.5	23.0	28.2	26.3	25.8	26.1	26.1	22.4	18.9	18.7	18.9
Former Soviet Union	27.1	25.5	22.3	17.9	12.4	9.8	9.0	8.9	9.4	10.3	7.4	4.9	4.9	5.0
Eastern Europe	21.4	18.9	15.8	10.7	10.7	18.5	17.4	16.9	16.7	15.8	15.0	14.0	13.8	13.9
Developed market economies	35.7	42.6	49.5	59.8	63.0	58.0	62.5	64.5	65.0	66.4	71.4	75.2	74.6	74.8
Developing economies	15.8	13.0	12.4	11.7	14.0	13.8	11.2	9.7	8.9	7.5	6.2	5.9	6.7	6.3
Imports														
World	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
ECE transition economies	42.0	36.4	26.6	25.5	24.7	29.3	26.1	25.3	23.8	22.1	18.3	18.6	22.1	21.4
Former Soviet Union	26.8	23.5	18.3	20.2	17.9	16.5	14.1	13.2	12.7	11.2	8.6	8.5	11.8	10.8
Eastern Europe	18.8	18.7	14.3	8.1	6.8	12.8	12.0	12.1	11.1	10.9	9.6	10.1	10.2	10.6
Developed market economies	38.7	44.0	53.3	58.3	64.4	61.5	65.0	65.8	66.6	68.1	72.4	70.8	67.6	67.2
Developing economies	19.3	19.5	20.1	16.1	10.9	9.2	9.0	8.9	9.6	9.8	9.3	10.6	10.3	11.4
Former Soviet Union/Russian Federation, *to and from:*														
Exports														
World	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
ECE transition economies	34.5	26.6	21.8	25.9	22.3	18.1	15.1	16.8	18.2	19.5	18.1	17.8	20.0	19.4
Eastern Europe	34.5	26.6	21.8	25.9	20.7	16.8	11.7	13.2	14.3	14.9	14.2	13.3	14.5	14.9
Developed market economies	42.2	41.8	49.5	56.5	57.9	59.7	66.6	60.6	58.1	58.6	60.0	58.0	55.6	55.2
Developing economies	23.3	31.6	28.7	17.6	19.9	22.2	18.3	22.6	23.7	21.9	21.9	24.2	24.4	25.4
Imports														
World	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
ECE transition economies	31.5	27.6	24.7	26.0	15.9	10.6	14.1	15.5	12.6	13.7	12.0	9.6	10.9	10.1
Eastern Europe	31.5	27.6	24.7	26.0	15.0	10.0	11.7	12.4	10.6	11.1	9.8	8.2	9.4	8.6
Developed market economies	46.4	50.1	52.9	58.1	62.4	60.6	70.3	69.5	67.8	68.3	68.2	68.3	69.3	67.6
Developing economies	22.1	22.3	22.4	15.9	21.7	28.8	15.6	15.0	19.6	18.0	19.8	22.1	19.8	22.3

Source: UNECE Common Database, derived from national statistics.

Note: Data for 1980-1990 refer to the east European CMEA countries (Bulgaria, Czechoslovakia, German Democratic Republic, Hungary, Poland and Romania) and to the former Soviet Union. Trade data in national currencies were revalued at consistent rouble/dollar cross-rates (see the note to appendix table B.11). As from 1991, eastern Europe covers Bulgaria, former Czechoslovakia (from 1993, Czech Republic and Slovakia including their mutual trade), Hungary, Poland and Romania, and the second panel reflects non-CIS trade of the Russian Federation only.

Partner country grouping has been recently revised with subsequent revisions back to 1980. Thus, the earlier reported "Transition economies" group is now replaced by "ECE transition economies", which covers the Baltic states, CIS and the east European countries including the successor states of the former SFR of Yugoslavia. The "Eastern Europe" partner group now covers Albania, Bulgaria, the Czech Republic, Hungary, Poland, Romania, Slovakia and the successor states of the former SFR of Yugoslavia, which earlier were in the "Other socialist countries" subgroup. The rest of subgroup "Other socialist countries", which in previous series covered China, Cuba, Democratic People's Republic of Korea, Mongolia and Viet Nam, is now included in the "Developing countries" group.

APPENDIX TABLE B.15

Exchange rates of eastern Europe, the Baltic states and the CIS, 1980, 1990-2001

(Annual averages, national currency units per dollar)

	Unit[a]	1980	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Albania	lek	..	8.90	24.20	75.03	102.06	94.62	92.70	104.50	148.93	150.63	137.69	143.71	143.484
Bulgaria	lev[b]	0.86	2.363	17.45	23.42	27.85	54.13	67.08	177.88	1 681.87	1 760.37 |	1.836	2.123	2.185
Czechoslovakia	koruna	5.37	18.56	29.42	28.29	..	..	..	..	..	..	..	..	..
Czech Republic	koruna	..	..	..	..	29.15	28.79	26.54	27.14	31.70	32.28	34.57	38.60	38.04
Slovakia	koruna	..	18.56	29.56	28.30	30.77	32.05	29.72	30.66	33.62	35.23	41.36	46.04	48.35
Hungary	forint	32.64	63.21	74.73	78.98	91.93	105.16	125.68	152.65	186.79	214.40	237.15	282.18	286.49
Poland	zloty[c]	3.05	9 500	10 576	13 627	18 136	22 723 |	2.42	2.70	3.28	3.49	3.96	4.35	4.09
Romania	leu	4.47	22.43	76.39	307.95	760.05	1 655.09	2 033.28	3 084.22	7 167.94	8 875.58	15 332.9	21 708.7	29 060.9
Yugoslavia (SFR)	dinar[d]	24.64	11.32	19.64	..	..	..	..	..	..	..	..	..	..
Bosnia and Herzegovina	convert. marka[e]	..	..	..	..	..	..	1.433	1.505	1.734	1.760	1.836	2.120	2.185
Croatia	kuna[f]	..	11.00	24.00	264.30	3 577.42 |	6.033	5.230	5.434	6.101	6.362	7.112	8.276	8.340
Slovenia	tolar	..	11.32	27.57	81.29	113.24	128.81	118.52	135.37	159.69	166.13	181.77	222.66	242.75
The former Yugoslav Republic of Macedonia	denar[g]	..	..	196.90	508.07 |	23.26	43.26	37.88	39.98	50.00	54.46	56.90	65.90	68.04
Yugoslavia	dinar[h]	..	10.65	19.73	750.00	..	1.55	4.74	4.96	5.70	11.07	22.84	54.74	67.67
Estonia	kroon[i]	..	..	..	12.11	13.22	12.99	11.46	12.03	13.88	14.07	14.69	16.98	17.49
Latvia	lats[j]	..	..	..	0.68	0.67	0.56	0.53	0.55	0.58	0.59	0.59	0.61	0.63
Lithuania	litas[k]	..	..	..	1.78	4.34	3.98	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Armenia	dram	..	..	..	..	9.11	288.65 |	405.91	414.04	490.77	504.92	535.06	539.53	555.08
Azerbaijan	manat	..	..	..	..	99.98	1 570.23	4 413.54	4 301.26	3 985.38	3 869.08 |	4 120.17	4 474.07	4 656.53
Belarus	rouble[l]	..	..	..	..	3160 |	4 652	11 538	13 472	26 729	58 971	274 512 |	882	1 390
Georgia	lari[m]	..	..	..	..	..	1.661	1.291 |	1.263	1.297	1.390	2.026	1.976	2.072
Kazakhstan	tenge	..	..	..	..	..	35.54	60.95	67.30	75.44	78.30	119.52	142.13	146.74
Kyrgyzstan	som	..	..	..	..	..	10.86	10.82	12.81	17.36	20.84	39.01	47.70	48.38
Republic of Moldova	leu	..	..	..	4.422	4.448	4.475	4.497	4.604	4.624	5.370	10.517	12.433	12.867
Russian Federation	rouble[n]	0.65	0.59	1.74	192.75	993.0	2 203.6	4 558.6	5 120.9	5 784.8 |	9.705	24.620	28.129	29.169
Tajikistan	samoni[o]	..	..	..	..	..	..	107.59	293.82	560.64	778.30	1 225.96 |	1.83	2.39
Turkmenistan	manat	..	..	..	..	..	14.1	116.7	3 594.6	4 142.9	4 592.4	5 200.0	5 200.0	5 200.0
Ukraine	hryvnia[p]	..	..	..	..	4 796	3 170	14 728 |	1.829	1.862	2.450	4.130	5.440	5.372
Uzbekistan	sum[q]	..	..	..	..	..	10.69 |	30.12	40.66	66.02	94.79	124.64	236.58	423.08
Memorandum item:														
Former GDR	mark[r]	3.30	8.14	1.66	1.56	1.65	1.62	1.43	1.50	1.73	1.76	..	..	..

Source: UNECE Common Database, derived from national, IMF and CIS statistics. Annual averages are unweighted arithmetic averages of monthly values. Change or redenomination of currency is indicated by a vertical bar.

Note: Under the central planning system with its state foreign trade monopoly, exchange rates served primarily statistical and accounting purposes (notably the conversion of foreign trade values for statistics expressed in domestic currency), without direct impact on domestic price formation. Market-based exchange rates and a meaningful link to domestic currency values emerged only with the transformations from 1989 onward. The official exchange rates of the earlier period are therefore not suitable for the conversion to dollars of macroeconomic and other data of these countries expressed in domestic currency. These strictures should be kept in mind in the interpretation and use of the data for 1980 shown above.

[a] Currency unit of the last period shown. For prior periods, see footnotes.

[b] The leva was redenominated at 1:1,000 from 5 July 1999.

[c] The zloty was redenominated at 1:10,000 from 1 January 1995.

[d] The dinar was redenominated at 1:10,000 from 1 January 1990.

[e] BAM (convertible marka), official rate (end-of-period and period average): the official rate is pegged to the euro. Prior to January, 1999, the official rate was pegged to the deutsche mark at a 1:1 rate.

[f] The kuna replaced the Croat dinar on 3 May 1994 at 1:1,000; the 1994 average is shown in kuna terms.

[g] The denar (which had replaced the Yugoslav dinar 1:1 on 26 April 1992) was redenominated 1:100 on 1 May 1993; the 1993 average is shown in terms of that unit.

[h] The dinar was further redenominated on 1 July 1992 (1:10), 1 October 1993 (1:1 million), 1 January 1994 (1:1 trillion) and 24 January 1994 (1:13 million). Average annual exchange rates not available for 1993. Estimated market exchange rates for 1998-2000.

[i] The kroon replaced the Soviet rouble in June 1992 with a peg to the deutsche mark (8:1); the average shown for 1992 refers to June-December.

[j] The lats replaced an earlier Latvian rouble at 1:200 on 18 October 1993; the 1993 average is shown in lat terms.

[k] The litas replaced the earlier talonas at 1:100 on 1 June 1993; the 1993 average is shown in litas terms.

[l] The Belarus rouble was redenominated 1:10 on 10 August 1994; the 1994 average here assumes this applied to the entire year. The Belarus rouble was further redenominated at 1:1,000 since January 2000. Annual averages were calculated from end-of-period monthly rates, and the period average since January 1999.

[m] The lari replaced the lari-kupon on 25 September 1995; the annual average for 1994 is shown in million lari-kupon, and that for 1995 in lari.

[n] 1980-1991: Soviet rouble/dollar rate used in the conversion of foreign trade data for statistical purposes. The rouble was redenominated at 1:1,000 from 1 January 1998.

[o] A new currency, the samoni, was put into circulation on 30 October 2000. Made up of 100 dirams, the samoni was to be used in parallel to the Tajik rouble for five months, with the exchange rate of 1,000 roubles to the samoni.

[p] The hryvnia replaced the former karbovanets on 2 September 1996 at 1:100,000; the average for 1996 is shown in hryvnia terms.

[q] Changes in currency (June 1994, 1 sum = 1,000 sum-coupons). Through December 1998 end-of-period; after period average.

[r] German Democratic Republic mark through 1990, deutsche mark thereafter.

APPENDIX TABLE B.16

Current account balances of eastern Europe, the Baltic states and the CIS, 1990-2001

(Million dollars)

	1990	*1991*	*1992*	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*	*1999*	*2000*	*2001*
Eastern Europe [a]	-5 726	-2 146	-967	-7 812	-2 636	-1 718	-12 788	-14 764	-17 329	-20 532	-18 007	-16 964
Albania	-118	-168	-51	14	-43	-15	-62	-254	-45	-133	-156	-218
Bosnia and Herzegovina	..	..	..	..	-177	-193	-748	-1 060	-676	-889	-918	-1 006
Bulgaria	-1 710	-77	-361	-1 098	-32	-198	164	1 046	-61	-652	-702	-842
Croatia [b]	-621	-589	329	637	711	-1 407	-956	-2 512	-1 453	-1 390	-433	-642
Czech Republic	-122	1 708	-456	456	-787	-1 369	-4 121	-3 564	-1 255	-1 462	-2 718	-2 625
Hungary [c]	123	267	325	-3 455	-3 911	-2 480	-1 678	-981	-2 298	-2 081	-1 328	-1 105
Poland [c]	716	-1 359	-269	-2 868	677	5 310	-1 371	-4 309	-6 841	-11 553	-9 952	-7 166
Romania	-3 337	-1 012	-1 564	-1 174	-428	-1 774	-2 571	-2 137	-2 968	-1 469	-1 363	-2 317
Slovakia	-767	-786	173	-532	759	511	-1 960	-1 827	-1 982	-980	-702	-1 756
Slovenia [b]	518	129	926	192	575	-75	56	51	-118	-698	-548	31
The former Yugoslav Republic of Macedonia [b]	-409	-259	-19	15	-158	-222	-288	-276	-308	-113	-108	-324
Yugoslavia	..	..	..	..	-400	-1 037	-600	-1 279	-660	-764	-339	-624
Baltic states	..	..	548	353	-59	-788	-1 400	-1 890	-2 426	-2 095	-1 462	-1 648
Estonia	..	..	36	22	-167	-158	-398	-563	-478	-247	-294	-340
Latvia	..	..	191	417	201	-16	-279	-345	-650	-654	-493	-735
Lithuania	..	..	321	-86	-94	-614	-723	-981	-1 298	-1 194	-675	-574
CIS [d]	..	..	-538	10 267	5 143	4 382	6 111	-4 192	-6 916	23 672	47 305	32 962
Armenia	..	..	-50	-67	-104	-218	-291	-307	-403	-307	-278	-196
Azerbaijan	..	153	488	-160	-121	-401	-931	-916	-1 365	-600	-168	-52
Belarus	..	..	131	-435	-444	-458	-516	-859	-1 017	-194	-323	-281
Georgia	..	..	-248	-354	-277	-216	-275	-375	-416	-195	-262	-211
Kazakhstan	..	-1 300	-1 900	-641	-905	-213	-751	-799	-1 236	-236	412	-1 749
Kyrgyzstan	..	..	-61	-88	-84	-235	-425	-138	-364	-180	-77	-16
Republic of Moldova	..	..	-152	-155	-82	-95	-192	-275	-335	-55	-106	-100
Russian Federation [e]	-6 300	2 500	1 142	12 792	8 291	7 457	11 725	2 032	659	24 731	46 405	34 575
Tajikistan	..	..	-53	-208	-170	-89	-70	-56	-108	-36	-63	-160
Turkmenistan	-308	447	926	776	84	23	0	-580	-934	-751	..	..
Ukraine	..	..	-526	-765	-1 163	-1 152	-1 184	-1 335	-1 296	1 658	1 481	1 402
Uzbekistan	..	..	-236	-429	118	-21	-980	-584	-102	-164	184	50*
Total above [a d]	..	..	-957	2 807	2 448	1 875	-8 077	-20 845	-26 672	1 045	27 836	14 350
Memorandum items:												
CETE-5	469	-41	698	-6 207	-2 687	1 897	-9 074	-10 630	-12 493	-16 775	-15 246	-12 621
SETE-7 [a]	-6 195	-2 105	-1 665	-1 606	51	-3 615	-3 713	-4 133	-4 836	-3 757	-2 761	-4 343
Asian CIS [d]	..	..	-1 133	-1 170	-1 459	-1 370	-3 723	-3 755	-4 928	-2 468	-152	-2 634
Three European CIS [f]	..	..	-547	-1 355	-1 689	-1 705	-1 892	-2 469	-2 647	1 409	1 052	1 022

Source: National balance of payments statistics; IMF, *Balance of Payments Statistics* (Washington, D.C.), various issues and *Staff Country Reports* (www.imf.org); UNECE secretariat estimates.

[a] Totals exclude Bosnia and Herzegovina and Yugoslavia.

[b] Excludes transactions with the republics of the former SFR of Yugoslavia: Croatia (1990-1992), Slovenia (1990-1991) and The former Yugoslav Republic of Macedonia (1990-1992).

[c] Convertible currencies. Hungary until 1995; Poland until 1992.

[d] 2000 and 2001 totals include estimates for Turkmenistan.

[e] 1990-1992 exclude transactions with the Baltic and CIS countries.

[f] Belarus, Republic of Moldova and Ukraine.

APPENDIX TABLE B.17

Inflows of foreign direct investment [a] in eastern Europe, the Baltic states and the CIS, 1990-2001

(Million dollars)

	1990	*1991*	*1992*	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*	*1999*	*2000*	*2001*
Eastern Europe [b]	480	2 332	3 125	4 193	3 583	9 309	7 982	9 421	15 447	18 677	20 462	20 281
Albania [c]	0	0	20	58	53	70	90	48	45	41	143	207
Bosnia and Herzegovina	..	..	..	..	0	0	0	0	100	90	150	130
Bulgaria [c]	4	56	42	40	105	90	109	505	537	819	1 002	694
Croatia	0	0	16	120	117	114	511	533	932	1 479	1 115	1 447
Czech Republic	132	513	1004	654	869	2 562	1 428	1 300	3 718	6 324	4 986	4 916
Hungary [d]	311	1 459	1471	2 339	1 146	4 454	2 275	2 173	2 036	1 970	1 649	2 443
Poland (cash basis) [c]	10	117	284	580	542	1 132	2 768	3 077	5 130	6 474	8 293	6 995
Romania	0	40	77	94	341	419	263	1 215	2 031	1 041	1 037	1 157
Slovakia	18	82	100	195	269	308	353	220	684	390	1 925	1 475
Slovenia	4	65	111	113	117	151	174	334	216	107	136	503
The former Yugoslav Republic of Macedonia [c]	0	0	0	0	24	9	11	16	118	32	176	443
Yugoslavia	..	..	..	..	..	..	0	740	113	112	25	165
Baltic states	..	..	119	238	460	454	685	1 142	1 863	1 139	1 176	1 165
Estonia	..	..	82	162	215	202	151	267	581	305	387	542
Latvia	..	..	29	45	214	180	382	521	357	347	410	177
Lithuania	..	..	8	30	31	73	152	355	926	486	379	446
CIS [e]	..	..	1 777	1 875	1 770	4 065	5 320	9 007	6 781	6 739	5 409	6 914
Armenia [c]	..	..	0	1	8	25	18	52	221	122	104	70
Azerbaijan [c]	..	..	0	60	22	330	627	1 125	1 023	510	129	227
Belarus [c]	..	..	7	18	11	15	105	352	203	444	119	104
Georgia [c]	..	..	0	0	8	6	40	203	265	82	131	110
Kazakhstan [d]	..	..	100	228	635	964	1 137	1 321	1 151	1 468	1 278	2 760
Kyrgyzstan	..	..	0	10	38	96	47	83	109	44	-2	25
Republic of Moldova [c]	..	25	17	14	12	67	24	79	76	40	143	149
Russian Federation	0	100	1 454	1 211	690	2 066	2 579	4 865	2 762	3 309	2 714	2 469
Tajikistan [c]	..	..	9	9	12	20	25	30	24	21	24	9
Turkmenistan [c]	0	0	11	79	103	233	108	108	64	80	100	130
Ukraine	..	..	170	198	159	267	521	623	743	496	595	792
Uzbekistan [c]	..	..	9	48	73	-24	90	167	140	121	75	70
Total above [b e]	..	..	5 021	6 305	5 813	13 828	13 987	19 570	24 091	26 554	27 046	28 360
Memorandum items:												
CETE-5	476	2 236	2 970	3 880	2 942	8 606	6 998	7 105	11 784	15 265	16 990	16 333
SETE-7 [b]	4	96	155	312	640	703	984	2 316	3 663	3 412	3 472	3 948
Asian CIS [e]	..	..	129	435	899	1 651	2 092	3 089	2 998	2 449	1 838	3 400
Three European CIS [f]	..	..	194	229	181	349	649	1 053	1 022	980	857	1 044

Source: National balance of payments statistics; IMF, *Balance of Payments Statistics* (Washington, D.C.), various issues and *Staff Country Reports* (www.imf.org); UNECE secretariat estimates.

Note: Changes in coverage are available in UNECE, *Economic Survey of Europe, 2001 No. 1*, chap. 5, box 5.3.1.

[a] Inflows into the reporting country.

[b] Excluding Bosnia and Herzegovina and Yugoslavia.

[c] Net of residents' investments abroad. Bulgaria, 1990-1994; Poland, 1990-1992.

[d] Exclude reinvested profits. Also see the note.

[e] 2000 and 2001 totals include estimates for Turkmenistan.

[f] Belarus, Republic of Moldova and Ukraine. Drawings less repayments.

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